

MANUFACTURERS' RECORD.

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BALTIMORE, AUGUST 2, 1895.

THE reorganization of the Savannah, Americus & Montgomery Railway under the name of the Georgia & Alabama Railroad takes another out of the list of bankrupt corporations and gives to the South a new railroad system covering a rich territory and with every prospect of becoming one of the most important systems of this section. The election of Mr. John Skelton Williams, of Richmond, as the president of the Georgia & Alabama is a well deserved compliment to one of the most active and progressive financiers of the South, to whose work this successful reorganization is largely due. Mr. Williams is so well known as a member of the old banking-house of John L. Williams & Sons, of Richmond, Va., that his identification with this new system as president will be accepted as a guarantee that it will be well managed. The remarkable business success of Mr. Williams, who is, we believe, still under thirty years of age, should be an inspiration to every young man of the South, for this section will from now on offer greater opportunities for young men than any other country has ever presented. Associated with Mr. Williams as vice-president and general manager will be Mr. Cecil Gabbett, whose experience in Southern railroad affairs will prove invaluable to the Georgia & Alabama Railroad.

THE Atlanta Constitution, in commenting on the editorial in last week's issue pointing out the possibility of Southern development as illustrated by comparison between Massachusetts and Georgia, says:

But it will be the work of time, and we must study the industrial methods of our competitors, extend our trade and draw capital and immigration this way. If we remain inactive and let the world know nothing of our advantages we cannot expect capital and enterprise to start out blindly on an exploring expedition. We must call them up with a "hello" that will be heard all around the world, and get them interested in our exposition, and prove to them that the fortunes of the future are to be made in this region.

THE board of managers of the Alabama exhibit proposed for the Atlanta Exposition have chosen Hon. Hector D. Lane as general manager.

A Possible Visit from New England Cotton Manufacturers.

As recently stated in the MANUFACTURERS' RECORD, the members of the New England Cotton Manufacturers' Association, which represents the entire textile interests of that section, are now considering the question of holding their October meeting in Atlanta. A vote is to be taken by mail, and every member has been requested by the board of governors to send in his ballot for Atlanta or the White Mountains, the rival points, by August 5. The MANUFACTURERS' RECORD has sent a personal letter to every member of the association urging a vote for Atlanta, and stating that their visit would be heartily appreciated by the entire business element of the Southern States, and that it would be a visit of mutual pleasure and profit.

The rapid extension of the textile interests of the South makes the study of the Southern situation and of the growth of this industry of peculiar interest from a business point of view to every cotton manufacturer. In no way can this be so advantageously done as by a visit of this kind. By means of such a trip our New England friends would have the opportunity of studying the South, of meeting many of its best cotton-mill managers, and at Atlanta they would see a full illustration of the resources of this great territory. Such a trip during the month of October would be an exceedingly attractive one to them. At that season of the year the climate of the Piedmont region of the South is almost an ideally perfect one, and they would be able to see this section at the very height of its cotton-picking and handling season.

As business men interested in the progress of the country at large, and especially interested in everything that pertains to cotton, the MANUFACTURERS' RECORD believes that they cannot afford to miss the opportunity of such a trip under such favorable auspices.

The acquaintance brought about by such a gathering as this of New England people in the South would help to strongly cement the social and business ties of the two sections. In this personal letter the MANUFACTURERS' RECORD said:

We are anxious to see the people of New England and the people of the South become thoroughly acquainted with each other. We believe that this can be done to better advantage by bringing them into personal contact than in any other way. We believe that the development of the South means the enrichment of the entire nation, and that New England can advance its own interests as well as the interests of the South and of the country at large by taking an active part in the industrial progress of the Southern States. We can assure you that the people of the South will welcome most heartily such a meeting as this. At Atlanta you would find manufacturers, business men and all others ready to give the warmest welcome, not only from a matter of hospitality, but from business reasons.

The MANUFACTURERS' RECORD learns

that owing to the distance, time and expense of a trip to Atlanta there is great danger of the vote being in favor of the White Mountains as the place of meeting. The people of the South should act promptly in trying to secure this convention for Atlanta, as it would mean the bringing to the South of a representative of nearly every large cotton concern in New England.

European Money Coming Again.

The New York World states that nine persons have arrived in that city within three days and four more are coming during the week, whose presence, it is said, "means a revival of European investment in United States enterprises." The World says:

Some of these gentlemen are foreign investors. Some are the advance agents and confidential advisers of foreign investors. They come to place foreign money in American enterprises, and they come in full confidence that the very best use that can be made of the plethora of money now held in London, Paris and other money centres is in American securities and American undertakings. For one enterprise for which the adviser recommended a subscription of £200,000, or \$1,000,000, there has been put up £2,000,000, or \$10,000,000.

A representative of the World has talked with one of the best advised and most conservative of these gentlemen, one whose advice to his clients for two years past has been to sell out their Americans. He is now advocating a precisely opposite course, and he gives reasons for his change of view.

THE MANUFACTURERS' RECORD congratulates the Baltimore Herald upon the completion of its magnificent new building. This structure, far in advance of any other newspaper building south of Philadelphia, is a monument to the work of Mr. Alexander Bechhofer, general manager of the Herald, in building up a great newspaper enterprise, and to Mr. Wesley M. Oler, whose untiring energy and broad-minded business ability have made possible the erection of such a newspaper home. Would that Baltimore had more Wesley M. Olers, and then it would soon take its proper place in the business world, and its progress would be commensurate with the marvelous advantages with which nature has blessed it. The Herald building, erected at a cost of about \$200,000, combines rare architectural beauty with the most perfect combination of facilities for a newspaper and office structure, including every detail from the excellently-arranged and splendidly-equipped pressroom in the basement to the artists' home on the top floor.

EVEN the people of far-away Alaska are becoming interested in the South. A letter from that territory to the Manufacturers' Record Publishing Co. this week brought four yearly subscribers to the Southern States magazine. If you want to reach the people of the North and West who are contemplating moving South or investing in the South advertise in the Southern States magazine.

Cotton to Japan via Tacoma.

In the New York Herald of last Sunday, its correspondent in Japan, Colonel Cockerill, refers to the fact that the largest steamship company in Asia—a Japanese company—increased its fleet by some twenty vessels during the recent war in order to facilitate the government's transportation to the armies in China. Now, that the war is over, this company finds itself overstocked with boats and is seeking a means of utilizing its steamers, and has in contemplation the establishment of a direct line from Japan to the Pacific coast.

THE MANUFACTURERS' RECORD would suggest that this company establish a direct line of steamers between Tacoma and Japan, and in connection with it secure direct shipping facilities for cotton from the South to Tacoma. If this matter could be worked up to a point where low freight rates from the South to Tacoma could be secured in connection with shipment thence to Japan, it might be possible to very largely increase the export of cotton to that country. Readers of the MANUFACTURERS' RECORD will remember that several through shipments were made last year in full trainloads from Southern points to Tacoma and thence to Japan. By working up this business systematically in connection with the Japanese line of steamers a very large increase might be brought about.

A Good Move in Alabama.

In a letter to the MANUFACTURERS' RECORD Mr. P. L. Bailey, of Dothan, Ala., writes that the outlook for saw-mill men in that section of the South is much better than it has been for several years. The farmers, he says, are raising enough corn to last them for the next two years at least, and "making their own meat" and other food supplies at home. "This county," he writes, "has moved its smokehouses and corncribs from the West to the South, and is in better condition than it has been since the war. Several Michigan farmers settled here last winter and are well pleased."

Mr. N. H. EGGLESTON, JR., president of the Southern Transportation Association, makes a vigorous protest in this issue of the MANUFACTURERS' RECORD against Southern railroads, claiming that they do not deal fairly with shippers.

THE Marion Improvement Co., of North Carolina, which has its main office in Harrisburg, Pa., is reported to have received a cable message from Berlin for a large quantity of monazite at seventy-five cents per kilo (2 2 pounds), which is a considerable advance on prices heretofore obtained.

THE old Alcade Furnace, of Rusk, Texas, has secured the contract for furnishing the iron piping for the Austin Dam Water Works Co.

ALABAMA GOLD DISCOVERIES.

Investigation by Expert for Manufacturers' Record.

[Special Telegram to MANUFACTURERS' RECORD.]
BIRMINGHAM, ALA., August 1.

Reports of the recent discovery of a rich gold vein in Cleburne county, Ala., have been so conflicting and apparently so exaggerated that I visited the place to ascertain the true state of affairs. The opening has been made on the old Marble vein named after its discoverer in 1839. The vein proper was never opened, but a rich pocket worked, then yielding over fifteen pounds of gold. The present opening has struck the vein two feet below the old workings. The mine is located one mile from Arbacoochee and nine miles from Heflin, and the vein is about five inches thick of white quartz heavily stained with iron oxide, and has a general strike northeast-southwest, with a dip so far as ascertained from forty-five to sixty degrees. The hanging wall is a shaley slate and foot wall fine grained gneiss. When the vein was struck only a small amount of rock was removed from it, as a question of title arose. So far as could be seen, not above 300 or 400 pounds of vein material were removed, and samples of this show so much free gold visible to the eye that it would likely average over \$4000 a ton. Panning any of the material in the hole or that taken out shows from \$5 to \$20 in a pan. A survey has placed the disputed line directly back of the face of vein where opened. By agreement both parties have suspended work pending settlement, and the pit placed under guard. It was filled with water, but through courtesy of owners this was taken out that I might inspect the vein. The find is as yet only a prospect, but a remarkably good one. The one place is thick with stringers of gold extending through the iron oxide and into the white quartz. The owners are sinking a number of prospecting pits along the strike in the vein to determine whether it continues or is a pocket. There is a great deal of excitement over the find, and numerous prospectors are out trying to locate the vein on other lands. Even though this should be found a pocket, there is an abundance of rich free milling rock left by those who went over the surface before the California gold fever. They crushed little, saving only the free gold caught in pans and rockers. The entire section shows their old surface diggings, and the rock and gravel left, if crushed, would yield paying quantities of gold. All veins of this character run into sulphides below water level, and the present vein, as well as old workings, are only decomposed surface rock. H. S. FLEMING, M. E.

Louisiana and the Sugar-Bounty Question.

One of the leading wholesale houses of New Orleans, in a letter to the MANUFACTURERS' RECORD, says:

"The New Orleans & Western Railroad is building a belt line, and will also build compresses, elevators, etc., on the old Battlefield plantation just below Chalmette. It seems a pity to destroy such a handsome place by putting it to commercial use, but we recognize the fact that progress in this world will sometimes cause us to sacrifice old landmarks. In this State we are passing through a period of depression caused by the non-fulfillment of the contract made by the United States government with the sugar producers. It strikes us very forcibly that this government is coming to a pretty pass when a subordinate officer can practically nullify the acts of Congress, as in this case. The failure to pay the bounty is working a great hardship. A large majority of the planters have made their calculations based on receiving this money, and the non-payment of it is placing many of them in a serious predicament. Otherwise

we are feeling some of the effects of the revival of business. We sometimes think it is only temporary, and that the full revival will not take place until there is a change at the head."

IRON AND RAILROAD MATTERS.

Interesting News from East Tennessee.

[Special Cor. MANUFACTURERS' RECORD.]
KNOXVILLE, TENN., July 18.

At Johnson City, where I stopped on my way here, I did not find as much of an improvement as I had anticipated. It had been currently reported that Mr. Wing, receiver of the Carnegie Iron Co., had succeeded in placing \$40,000 of receiver's certificates, authorized by the court, with which to cancel the company's obligations and complete the plant. This had not been done, and I believe it is a rather good thing. This money would simply free the plant from obligation and complete it. Then, in order to blow in, there would have to be raised at least \$50,000 more. This with the \$40,000 would increase its indebtedness \$90,000, and this sum, together with the bonds, would make entirely too great a sum on which to pay interest. It would be far better for the receiver to sell the plant, and the owners either pocket their loss or reorganize on some business-like basis. Half a loaf is better than none, and certainly a furnace free from debts and in condition and position to be attractive to capital is better than one hampered by bonds, receiver's certificates and a mortgage on its materials and product as security for the capital advanced to start it. This is a good time for reorganization, and I would recommend that process, unpleasant as it may be, to the stock and bondholders of the Carnegie Iron Co.

Regarding the advisability of operating the plant and the possibility of making a profit, I am inclined to think that it can be done, only (and I emphasize this) it will need the most skillful and economical management. Pocahontas coke can be delivered for but slightly more than at Bristol, and when ovens are completed at Big Stone Gap this fuel could likely be had for from \$1.80 to \$2. Some time in the future the Charleston, Cincinnati & Chicago Railroad will reach the coalfields of Eastern Kentucky, and then another source of coke can be drawn on. For ore the furnace would have somewhat of an advantage over Bristol, in that the Embreeville ores are only ten miles distant; and further, the road above referred to taps some excellent ore deposits in its branch now operating from Johnson City southward. As to Cranberry ores, I believe the furnace is better without them, for the present at least. This ore has been used at several places and in no case has it given satisfaction. One reason has been the carelessness shown in clobbering at the mines, the result being that the average iron contents has been in many cases below 35 per cent., and in one case a lot of 500 tons was stated to have averaged only 33 per cent. Of course, the iron made was exceedingly low in phosphorus, the average in the lot of ore referred to being .009 per cent. But, valuing the ore per unit of iron contained, even with the higher price which may be secured for the product, it is too expensive.

In estimating the cost of iron at Carnegie furnace I have no absolute figures on the price of ore, and give merely an approximation, based on the character of the brown-ore deposits and their distance from the furnace:

Coke, 1½ tons at \$1.80.....	\$2 25
Ore, 2½ tons at \$1.40.....	3 15
Limestone, ½ ton at 80 cents.....	40
Cost of material.....	\$5 80
Labor and other items.....	2 50
Total.....	\$8 30

I am told that certain brown-hematite ores on the Charleston, Cincinnati & Chicago, averaging 45 per cent. iron, can be

delivered for \$1 per ton. If this is the case the cost could be materially lowered. In estimating labor and other items I do not include interest on any such indebtedness as is now proposed by the receiver.

The Charleston, Cincinnati & Chicago road is preparing to build a 10-mile extension to the coalfields. I am told, but this preparation has been going on for so long that it is hard to believe it until work commences. Now that the many conflicting interests of this road have been practically adjusted and placed in the hands of the Pennsylvania Finance Co., I expect that it will not be long before some definite and active steps are taken to put the property on a paying basis. Mr. Earle, president of the finance company, is a man of more than usual ability and one whose judgment can be relied upon, and who, when he undertakes anything, is certain to carry it out. In this property he has one well worthy of his best efforts. In the past thousands of dollars were thrown away in its construction through lack of ability on the part of some of those in charge of the work (in some cases I suspect in far worse ways) and again, in carrying on its pay-rolls a long list of high-salaried officials, most of whom could have been replaced by a clerk or some other equally cheap and efficient worker. I don't think it likely that such a condition could exist under Mr. Earle's supervision. He has a way of enquiring into expenditures which would quickly put a stop to extravagance.

It is to be hoped that the road may be carried out. The territory which it will open through Eastern Kentucky, Tennessee, Western North Carolina and South Carolina is wonderfully rich in minerals and timber and presents possibilities greater than can be believed by anyone who has not been through it and made himself familiar with its resources by personal inspection. I will have more to say of this.

But Johnson City has another railroad, a little narrow-gauge running out to the Cranberry ore mines. It is a distance of about thirty miles, and the speed at which the trains run is so great that it requires only three hours to make the trip. The trains, one each way per day, are mixed, badly mixed—freight cars and a passenger coach. The trip is equivalent to an afternoon's pleasurable enjoyment on one of the new gymnasium bumping machines. The owners make capital of this, as when you purchase a ticket you pay one cent per mile extra for massage. In freight rates the road is operated on that beautiful and fundamental principle that if you don't like it you need not send anything over it. The management establishes a rate sufficient to pay expenses, expecting that anything over the normal amount of freight will go to profit. Concessions or accommodations to induce people to ship more or develop territory on its line have no place in the mind of its management. It has the same ideas of progress as the razor-back hog, and reminds one forcibly of the sentence in Rochester's essay to Mulgrave:

"Born to myself, I like myself alone."

It has from its inception followed a selfish and short-sighted policy that has not only kept it from prospering as it might have done, but has greatly hindered the development of the country through which it passes.

The little furnace at Cranberry, built for charcoal, but operated for some time on coke, is not in blast. The stack is fifty feet high by eleven feet six inches at the bosh, with a capacity of 5200 tons per annum. Using Cranberry ore it produced a special Bessemer iron which was said to contain not over 0.01 phosphorus, and to bring considerably over the market price for Bessemer grades. A rough magnetic separator was erected to concentrate the ore, bringing the average up to about 45 per cent. iron.

Embreeville furnace and ore mines, lying eight miles from Johnson City, on a branch of the Southern Railroad, are idle just now, but Mr. Guy R. Johnson, of Longdale, Va., who has been in England consulting with the owners relative to starting the plant, is expected back shortly, and in anticipation of work commencing the machinery and tools are being overhauled and gathered together.

Embreeville has a decided advantage in the nearness of large deposits of excellent brown-hematite ores which can be mined and delivered under \$1 per ton. Its coke must come from either Pocahontas or Middleborough, though it will have a chance at that to be produced at Big Stone Gap. I am told, and can readily believe, that one of the reasons the furnace did not succeed before was that certain of its stockholders had relatives and friends for whom places had to be found. I hope Mr. Johnson will not be hampered by any such useless and expensive persons. He is a capable manager, and deserves the full support of his directors, and, to handle the property so as to show a profit, it will not do to have any of the directors or stockholders' apron-strings hanging around. The furnace is 80x19 feet, and has an annual capacity of 54,000 tons.

Several of the smaller industries at Johnson City are at work. Two stave factories are going, the big tannery is operating full time and the furniture factory, which has been idle for a long time, is to be taken in hand and will start shortly.

The future of the place depends largely on the Charleston, Cincinnati & Chicago Railroad, and when this is pushed forward it should bring much business to the place and add greatly to its facilities as a manufacturing point. No help can be expected from the Cranberry razor-back road. The Southern Railroad is now doing all that it can to help forward the industries here, as indeed at all other places along its line, and was it not for the active interest and hearty co-operation which it has shown the town would be absolutely dead. It will never come up to "boom" expectations, but I see nothing to hinder it from becoming a prosperous manufacturing town of fair size, though this will not be accomplished in a day.

At Knoxville there is a general acknowledgment that the volume of business has increased and collections are better than for some time past. As this city is the wholesale centre for a very large section of East Tennessee, any depression or advance is noted very quickly, and the present improvement is now considered by all as permanent and the beginning of the better times which have been predicted for so long.

While in the city I called upon Mr. Boone, who signs himself the great railroad "pathfinder" and is projecting again the oft-projected railroad from Jellico through Knoxville to Port Royal or some other point. The MANUFACTURERS' RECORD has already called attention to this attempt, so there is no need for me to go into the details. Mr. Boone—I should say Col. Albert E. Boone—distributes freely a folder, on one side of which is a half-tone portrait of himself and on the other a biographical sketch, in which, in heavy-faced type, comment is made on his unusual ability to handle "men, material and transportation." Unfortunately Colonel Boone was absent both times I called, though the last call was by appointment, so I did not see him personally, but one of his assistants courteously gave me such information as he could, and also copies of the various pamphlets and folders which have been published. The first purpose is to build a belt railroad around the city, and for this purpose rights of way and a large bonus of land is asked. This land is to be laid off in manufacturing sites and manufacturers

are to be induced to locate upon them. A railroad is then to be built to Jellico, and beyond if necessary, so as to bring coal to the city and also to give a direct route to the sea. It does not appear to have come to the mind of the projector that there are already three railroads leading from Knoxville to the coal lands, and that none of them have ever been found profitable—one, the Knoxville & Ohio; another, the branch of the Southern road to Harriman and up the Cincinnati Southern, and the third, the Knoxville & Cumberland Gap. Mr. Boone wants to build a fourth road to compete with three non-paying roads now operating. The main road then is to be from Knoxville to either Port Royal or Charleston, S. C. In building this he proposes using some short lines of road already built, and at other places graded road built for this same line many years ago. From Knoxville to the seacoast the project is feasible, but the other end is foolishness.

The feature which seems to be most unwise about the Colonel's project is the manner in which he is to raise the money. According to his circulars, speeches, etc., it is to be based first on subscriptions of money, and lands by the people and money by the counties, and with these as securities he proposes raising, on bonds, the cash required for the work. Now, as there will be something over 300 miles from Knoxville to the coast, and as this will not cost less than \$25,000 per mile, and some of it twice that amount, there is a large sum to be raised. Call the average \$30,000 a mile, that would make the cost just \$9,000,000. Where is this coming from? According to a survey made some time ago it was estimated that the cash bonus offered by the various counties and towns through which the road would pass would amount to about \$750,000. This is only a drop in the bucket. The plan would seem to be to get land from all who will be benefited and put this up as collateral. It would need a great deal of it, but it might be done. Then, if any unforeseen difficulties should occur, as happened with the Charleston, Cincinnati & Chicago, the men who gave the land would get in return nothing. It is a risky experiment, and while I should like to see the road built, I think the enterprise would prosper better and more safely in the hands of men who had money to put in it and showed their good faith by doing it. The other day, as recorded in your columns, he secured from Knoxville city and the county \$100,000 of securities which they owned in the Knoxville & Ohio Railroad, now controlled by the Southern Railway. Some time ago the latter system offered \$40,000 for these securities, but their offer was declined, Colonel Boone had them transferred unconditionally, and is going to sell them to raise money to begin surveys. Who will buy? One don't need to guess hard. [It is since reported that these securities have been sold for \$40,000 cash, the name of the purchaser not being given.—ED.]

Suppose, now, that somebody had wanted these securities very badly, would it be an easy matter to engage a promoter to get them by asking them as a bonus to help some new enterprise; then when they are secured and sold the promoter could go home and leave his enterprise to languish—and die. It is to be hoped that this will not be the case here.

The business people of Knoxville are not actively stirred up over Colonel Boone's enterprise, but the general feeling seems to be that if he can do it, well and good, only he need not look for any extensive cash subscriptions from the people individually.

At Middlesborough the only work going on is at the Watts furnaces. Mr. DeBardeleben, formerly superintendent of the Alice furnace in Birmingham, has charge, and is pushing repairs so as to get in blast about

the middle of August. It is stated that in order to insure a supply of high-grade brown ores the company has purchased some properties on the Marietta & North Georgia road near Ducktown, Tenn. The steel plant is being placed in readiness also, and will start two or three months after the furnace goes in, the purpose being to first get a mixture which will make a suitable iron. Work is going on at the company's ore mines below the Gap.

H. S. FLEMING.

The Mathieson Alkali Works.

For nearly a hundred years the English have carried on a very large manufacturing business called by them the "alkali trade." The principal products of this trade are soda-ash, caustic soda, bleaching powder, bicarbonate of soda, common salt, pearl hardening, and under some circumstances sulphuric acid, glauber salts, sulphites, sulphur, copper, gold, silver, and even other materials. Of all the substances mentioned, soda-ash, caustic soda and bleaching powder are the principal products, the others are subordinate. They represent effort to work up to advantage by-products or substances incidental to the chief materials.

To the ordinary reader "soda-ash" conveys but little suggestion of its importance as an article of trade; still, it has come to be within the last hundred years a substance of vast commercial interest. Probably the world's annual production is not far from a million tons. Probably the consumption of the United States is about 1000 tons for every day in the year, including Sundays. It is used in the manufacture of glass and of soap, in the various departments of the bleaching industries, i. e., in the bleaching of cotton goods, in scouring of wool and in the manufacture of wood paper, these alone suggesting enormous avenues of consumption. It is employed also in a great many minor industries. The increased use and manufacture of the article has been largely referable to fall in price. Every drop in the selling price has probably been answered by the extension of consumption.

Previously to 1793 the demands for alkaline materials for the manufacture of soap and glass were supplied by wood ashes and seaweed ashes. The ashes of wood, when slightly refined, were called "potash." The crude ashes of seaweed or marine grass were called "kelp," "barilla," "varec;" the refined material was called "soda-ash." About 1793 many attempts were made in France to manufacture soda-ash direct from sea salt. Of these attempts, the method devised by Nicholas LeBlanc proved the most successful. However, it was exploited chiefly in England, and is still carried on under the name of the "LeBlanc process." In this process the sodium of the common salt is turned into carbonate of soda, or soda ash. The chlorine of the common salt is turned into bleaching powder. For the success of the operation, however, sulphuric acid or oil vitriol is necessary. But as the oil vitriol is now largely made from pyrites containing iron and copper, with traces of silver and gold, the manufacturers by this method have come to save the valuable metals of copper, silver and gold, and they have come also to make large amounts of sulphuric acid for the trade. The United Alkali Co., of England, is still carrying on the manufacture of soda-ash by the LeBlanc process, and it is still engaged in the manufacture of many of the incidental products referred to earlier in this article.

We have referred to two historical stages in the alkali industry, that is, the seaweed stage and the LeBlanc stage. Some fifty years ago a third stage, that of the ammonia-soda process, was invented, and about thirty years ago it was put into successful operation, principally by Alfred Solvay and Ernest Solvay. The ammonia process is now the principal process of manufacture.

The fourth stage appears to be that of

the future, the electrolytic stage. It seems likely that common salt will yet be successfully decomposed by electrolysis, the sodium being turned into soda-ash, and the chlorine being turned into bleaching powder. Many patents contemplating this electrical decomposition have been taken out. A large portion of them have been found defective in practical working. A few of them at the present day show promise of success. Of these, perhaps Castner's is the most successful of all, and arrangements are now on foot in both England and the United States to conduct it on a large industrial scale.

For the manufacture of soda by the ammonia process, the principal raw materials demanded are common salt, lime, ammonia, coal and coke.

The Mathieson Alkali Works has established its industry in Saltville, in the southwestern part of Virginia, for the purpose of carrying on this manufacture and other industries incidental to it. This place has been selected because of the convenient proximity of all the substances required.

The salt exists there in beds of enormous thickness, near to the surface. Recent surveys with the drill have shown that within 1000 feet of the surface and convenient of access lie beds of salt aggregating 500 feet in thickness. Moreover, the salt is of high quality, such as to make it favorable for the works.

The hills immediately adjacent to the works are of limestone, containing but minute percentages of impurity. Thus the stone can be drawn from the hills directly into the lime-kilns at the very lowest cost of handling. Moreover, the limestone is in enormous quantity, tremendous deposits existing all over the premises of the company.

Ammonia will be drawn from gas works adjacent, the manufacture of illuminating gas being practically the only source of ammonia at the present day. The works are so situated that by easy transportation the ammonia may be obtained from Southern towns and cities making illuminating gas.

Within a short distance of the works are unsurpassed beds of coal of the Pocahontas field. It is believed that coal of fine quality can be landed at Saltville at not far above \$1.00 per ton.

The Mathieson Alkali Works Co. was organized under the laws of the State of Virginia, and has already a paid up capital of \$2,500,000. Interested in this company are many prominent Northern capitalists, of whom the following may be mentioned: Messrs. Mathieson, of Scotland; R. T. Wilson & Co., of New York; W. F. & F. C. Sayles, of Pawtucket, R. I.; gentlemen connected with the firm of Brown & Ives, of Providence, R. I.; Wm. A. Slater, of Norwich, Conn., and others. Already the company has erected large works for the manufacture of salt, and this salt of fine quality and extreme whiteness, and every way satisfactory to the trade, is now in the market. It is believed that the company can successfully introduce this salt incidental to its other business.

The company has already erected two large factories for the manufacture of soda-ash and caustic soda respectively. The works are complete and now running, and soda-ash of excellent quality has been turned out. Later, the manufacture of glauber salts, largely used in glass-making, and bleaching powder, largely used in paper making and the bleaching of cotton goods, will be set in motion.

The company has works already under way for the practical employment of Castner's electrolytic process. The material for these works is already on the ground and partly set up. Here caustic soda of a very high degree of purity will be produced, and bleaching powders or bleaching liquors will be manufactured also.

In the ordinary method of making caustic

soda, soda-ash is decomposed by the use of lime. The Mathieson Alkali Works has everything ready for the manufacture of caustic by this process, in addition to that made by the Castner process.

The property of the company is about 10,000 acres of land, including the salt deposits, limestone deposits, the adjacent water-power, and all at near proximity to excellent and cheap coal supplies. It is located on a branch of the Norfolk & Western Railroad, and it owns locomotives and rolling stock necessary for its own business. The railroad tracks run the whole length of the works in the company's yard, and everything is constructed with the view to convenient handling of a very large product. Even those unacquainted with the business will recognize at once that the production of 200 tons a day of a single substance involves the handling of a large amount of material. The works of the company are so constructed as to handle this vast material at a minimum of cost, i. e., a minimum of hand labor.

The works have been constructed and are now under the management of Mr. T. T. Mathieson, long connected with the Mathieson Alkali Works, of Scotland. Mr. Mathieson has had a large experience in Europe, both in constructing and running works of this character, and he is believed to be one of the most capable and expert managers in this industry in the world.

The Business Outlook in the South.

By Albert C. Stevens,* Editor Bradstreet's.

The business situation in the South, as elsewhere in the country, is improving, but as the South felt the effects of the depression in 1893 later than the Northern and Western portions of the country, it is showing signs of revival somewhat after cities further North and West. Notable exceptions are found at Chattanooga and Birmingham, where the iron industries and enterprises connected with them are already showing signs of revival. In Texas prolonged rain has affected country merchants unfavorably, and trade has been relatively more depressed there in consequence. The delay in the payment of the sugar bounty has had an unfavorable effect in Louisiana. The Atlantic coast States report a moderate revival in general business, particularly with respect to the location of new manufacturing industries and the transfer and establishment of cotton-manufacturing concerns, the outcome of which is being awaited with more than usual interest.

Mercantile collections throughout the South have been only fair for a long time, and, aside from the moderate revival due to the advance in the price of cotton, little has been reported thus far to stimulate general trade.

Since March 1 the course of general trade throughout the United States has been distinctly upward. The volume of business has increased; labor and railway earnings have improved; manufacturing industries have enlarged their outputs; the crop prospects of the whole country have been more than fair; bank clearings have become unexpectedly greater, and, in late weeks, have shown an increase as compared with like periods three years ago, in 1892, one year before the panic, a year of exceptionally large volume of business. This cannot be attributed, even in part, to speculation in securities at New York or elsewhere, for the reason that the totals referred to do not cover periods when speculation, in Wall street particularly, was excessive.

An additional reason for this statement is found in the fact that Wall-street settlements are today made by balances through a clearing-house, and are not, as formerly, based upon detailed individual transactions, a procedure which resulted frequently in practically trebling the actual volume of

*Interview with special correspondent MANUFACTURERS' RECORD.

business. This point is one which must be kept in mind in considering clearing-house totals. When, in view of this fact, it is seen that bank clearings for several weeks have been about equal to or in excess of those in corresponding weeks three years ago, a fair idea may be had of the improvement in general trade in the United States since March of this year.

In this improvement the South has shared, though (as pointed out) not quite to the same extent. It is of importance, however, to emphasize the fact that the movement and the tendency at the South is parallel to that shown elsewhere, and as the South was the last to feel the effects of the financial storm, it is, perhaps, only natural it should be slow in recovering.

It is a matter of congratulation that whatever industrial and commercial progress is being achieved at the South is not based on special efforts to create a fictitious basis for prosperity. The era of "booms" there appears to have passed. Several years ago there were a number of such efforts to stimulate prosperity, most of which came to an untimely end, much to the advantage of the South. Today at all of the dozen or more important distributing centres through the South Atlantic and Gulf States business appears to be done on a cash basis to a much greater extent than for many years. The statement has become threadbare that the Southern planter has ceased mortgaging all of his crops. This has been true for nearly two years, and so long as the Southern planter maintains this advantage and continues to raise more corn, hops and other farm crops than cotton, thereby divorcing himself from the Western dealer in those products, to just that extent the South has been and will be enriched.

With the development of the cotton industries of the South, which at present offer such a bright future, the character of the labor which the South has to offer presents a most important element for consideration—one which some of the manufacturers of the North and East have not been slow to take advantage of. This has been shown by the removal South of a number of cotton mills from New England, by the building of mills at the South by New England and other Northern corporations, and by the interest exhibited in the iron and coal industries (as in Tennessee, Alabama and elsewhere) by capitalists connected with like industries in Northern States.

The fact that Southern pig iron could be made for less than \$10 a ton at the furnace was pointed out by Bradstreet's ten years ago, after which a controversy sprung up between the Iron Age, the Louisville Courier-Journal and a number of other newspapers as to whether the South could compete with the North as to price in the manufacture of pig iron. The proprietors of many Northern furnaces declared that the South could not send iron North in competitive quantities. An investigation was made by Bradstreet's, which resulted in showing that within the previous twelve months more than 100,000 tons of Southern pig iron had been shipped north of Maryland and east of Ohio to markets in competition with Northern pig iron, which, at prices then prevailing, so surprised the trade that the late Mr. Benjamin G. Clarke, of the Thomas Pig Iron Co. (the leading Eastern anthracite furnace), reduced the price of Northern pig iron \$2 a ton within twenty-four hours in order to keep out the Southern production.

This was the first evidence made public respecting the possibilities of the South as a home competitor in the manufacture of pig iron. The discussion after that became one merely of what the minimum price would probably be at which the South could make that valuable commodity.

The records of the last year have shown that the South, as a manufacturer of pig iron, cannot be left out of the account in any future estimate of the price at which the United States can produce the article.

RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department, on page 14.]

A RAILROAD CELEBRATION.

Virginia and West Virginia Compared with Pennsylvania.

On Wednesday, Dayton, Va., celebrated by "a jubilee and banquet" the completion from Harrisonburg to that point of the Chesapeake & Western Railroad. The editor of the MANUFACTURERS' RECORD, being unable to accept an invitation to participate, sent a letter touching on the possibilities of development in Virginia and West Virginia, from which are taken some extracts that may be of general interest:

"* * * I have watched the progress of this enterprise (the Chesapeake & Western Railroad) with great interest, and when first undertaken congratulated the people of Virginia and West Virginia upon securing a railroad which promises so much for these two States. Marvelously blessed by nature as Virginia and West Virginia are, we can best form an idea of the great possibilities of development before them by a comparison with what the neighboring State of Pennsylvania has accomplished.

"In every material aspect—in soil and climate, mineral and timber wealth and agricultural capabilities—these two States far outrank Pennsylvania. Probably no other equal area in the world has been more lavishly blessed than the Virginias, and yet, for reasons which it would be needless to discuss, their material advancement has been far short of what Pennsylvania and other Northern and Western States have accomplished. In the fullness of time the railroad and industrial progress of these two States is now about to enter upon a new period of activity. What this means for the future, what it means for an increase in wealth, for more diversity in agricultural interests, can, as stated, best be judged by a comparison with Pennsylvania.

"The area of Virginia and West Virginia combined is 67,000 square miles; that of Pennsylvania 45,000 square miles. West Virginia alone has 17,000 square miles of coal territory, much of it of the best and richest in the world, while Pennsylvania has only about 12,000 square miles, and yet Pennsylvania is mining on an average about 35,000,000 tons of coal a year, while West Virginia and Virginia combined are putting out only about 12,000,000 tons. Pennsylvania, with only two-thirds of the area of the Virginias, has nearly 10,000 miles of railroad, while they have only about 5500 miles.

"Owing to the enormous industrial interests of Pennsylvania, its farmers have prospered to a degree which can only be comprehended by some statistics gathered from the last census.

"In 1890 Pennsylvania had 211,000 farms aggregating 18,300,000 acres, valued at \$920,000,000, while Virginia and West Virginia combined had 200,000 farms aggregating 29,400,000 acres, valued at \$406,000,000. In other words, Pennsylvania's farms, with only two-thirds of the area of the farms of Virginia and West Virginia, were worth \$500,000,000 more than the farms of the latter States. Pennsylvania farmers had \$30,000,000 invested in agricultural implements and machinery, while those of Virginia and West Virginia had \$9,600,000; the former had \$101,600,000 invested in live-stock, while Virginia and West Virginia, with all their magnificent grazing lands, had only \$57,300,000 in live-stock; the value of the farm products of Pennsylvania, raised on 18,000,000 acres, was \$121,000,000, while the value of the products of the 29,000,000 acres of farms in Virginia and West Virginia was just one-half, or \$62,000,000.

"This vast difference in the agricultural interests of the Virginias as compared with Pennsylvania is largely due to the fact that the latter State has so enormously developed its industrial interests as to have enhanced the value of its farm property, created a home market for the products of its farms, and thus brought about a more thorough cultivation of small farms. What Virginia and West Virginia can do in industrial development, and how vast can be their growth in the years to come before there can be any possibility of overdoing the business, may be understood when it is remembered that Pennsylvania, with its 45,000 square miles of territory and with less natural resources of coal and iron and timber than the Virginias, produced of manufactured goods in 1890 \$1,330,000,000, against \$127,000,000 for Virginia and West Virginia; while Pennsylvania paid out to its factory hands \$305,000,000 in wages in 1890, the two Virginias paid out \$27,900,000; while they had only 81,000 hands employed in factories, Pennsylvania had 620,500. In fact, Pennsylvania has more capital invested in manufacturing than the fourteen Southern States from Maryland to Texas. In 1890 these fourteen States had \$657,000,000 invested in manufacturing enterprises, while the one State of Pennsylvania, but a fraction larger than Virginia alone, and one-third less in area than Virginia and West Virginia combined, had \$957,000,000 of capital in manufacturing.

"In the light of these figures we can see what unlimited possibilities stretch before the business people of these two favored States, as well as of the entire South. Here is a region offering marvelous opportunities for railroad construction, for industrial expansion and for diversified farming operations. Here is a country which combines nearly all of the natural advantages of all other regions without their disadvantages—a country presenting great opportunities for wealth-creation and for advancement in all material affairs and in all that makes for the upbuilding of a great State.

"The work which Mr. E. C. Machen, as president of the Old Dominion Construction Co., and Mr. J. W. Reinhart, as president of the Chesapeake & Western, and their associates, are doing for Virginia and West Virginia should rally to their aid the heartiest assistance that can be given by everyone who has at heart the best interests of the great country which their line will traverse. If this road be built, as I believe its projectors intend to do, from tidewater on the eastern side, across the valley through the marvelous mineral and timber wealth of West Virginia, to slack water on the western side, it will prove a powerful factor for the advancement of both States. It will add millions of dollars to the wealth of these States, bring into the market vast areas of unutilized coal and timber lands, attract settlers from other sections of our country to the great agricultural districts which it crosses, and not only create a market for their products, but create a market for their labor and their brains by opening up to the younger generation many opportunities for profitable employment.

"The people of Virginia may well bid godspeed to this great railroad undertaking."

Across Maryland Peninsula.

The Peninsular Construction Co., whose plans to build a railroad from Queenstown, Md., to Lewes, Del., have already been detailed in the MANUFACTURERS' RECORD, has organized by electing directors as follows: John S. Gittings, Bartlett S. Johnston, Henry James, Edwin F. Abell, Alexander Brown, Wesley M. Oler, Basil B. Gordon, Dr. Chas. H. Tilghman, Gustavus Ober, Henry C. Matthews, Douglas H. Gordon and John S. Gibbs. Douglas H. Gordon was elected president; George B. Baker, vice-president; Edward Stabler, Jr.,

secretary, and Robert W. Smith, treasurer.

Contracts will be awarded for building the road in sections. It is proposed to let the first contract for the section extending twenty three miles from Queenstown east to Denton. A committee composed of Messrs. John S. Gibbs, Wesley M. Oler and Henry C. Matthews will examine bids and award the contract.

The Georgia & Alabama Railroad.

The work of reorganizing the Savannah, Americus & Montgomery under the title of the Georgia & Alabama is at last practically completed by the election of Mr. John Skelton Williams, of Richmond, as president; Cecil Gabbett, vice-president and general manager; J. Willcox Brown, treasurer, and W. W. McCall, of Savannah, secretary. Among the directors are Mr. Adolph Ladenburg, of the banking and foreign-exchange firm of Ladenburg, Thalmann & Co., of New York; C. Sydney Shepard, of New York; J. W. Middendorf, of Middendorf, Oliver & Co., Baltimore bankers; R. B. Sperry, Baltimore; John Flannery and John K. Garnet, of Savannah; James D. Stetson, of Macon, and S. A. Carter, of Columbus, Ga. Mr. Williams, who is a member of the banking firm of John L. Williams & Sons, of Richmond, has been at work upon the reorganization of the property for some months, and is well known as a gentleman of ability and energy, also as an expert financier. Mr. Willcox Brown is president of the Maryland Trust Co. of Baltimore, while the majority of the other directors are connected with prominent banking or business institutions. The MANUFACTURERS' RECORD believes that under the present management the road will be operated for the best interests of its stockholders and the section of the South which it traverses. Mr. Cecil Gabbett, who will have immediate charge as general manager, has had long experience in Southern railroad affairs.

The MANUFACTURERS' RECORD is informed that the company will extend its system into Savannah at once. A part of the extension may be secured by acquiring lines already built, but, if these negotiations fail, the company is prepared to build at once. With Savannah as a terminus the Georgia & Alabama will be the shortest and most direct route between Savannah and Montgomery. There is every reason to believe that with the through traffic which it will receive by forming the direct route between these cities, and added to its local traffic, the earnings will materially increase this year.

To Cool Fruit Cars.

Mr. S. T. Neil, of Fort Valley, Ga., has perfected an invention by which it is reported the present means of cooling and ventilating fruit cars can be greatly improved. The invention consists of a wheel attached to the car axle, which operates an endless chain working on another wheel hung from the bottom of the car. A motive power is produced from the axle, which in turn operates a compressor containing anhydrous ammonia. By the motion of the car the ammonia is forced through pipes as in a cold-storage warehouse and any desired temperature can be obtained. The inventor claims that a carload of peaches can be sent from Fort Valley to New York at a cost of \$25 for cooling, which is said to be a saving of about \$65 per car compared with the icing method now in use. It is understood that Mr. Neil will organize a company and begin manufacturing the apparatus.

A Railroad Telegraph Contract.

The Western Union Telegraph Co. has made a 25-year contract for the telegraph service for the Chesapeake & Western Railroad, of Virginia, and is now erecting lines on the first sixty miles.

NEW ELECTRIC RAILWAY.

A Projected Air Line from Washington
Northward to Gettysburg—
An Important Project.

Mr. Alex. D. Anderson, of Washington, who has in charge the movement for promoting the construction of an electric railway from Washington to Gettysburg, which would be the longest continuous electric line in the country, in an interview has furnished the MANUFACTURERS' RECORD the following interesting statement explaining the plans and purposes of the enterprise:

"A few weeks ago I was retained by leading citizens of Westminster, Union Mills and other towns in Central Maryland to formulate and develop a plan for direct railway connection with Washington. In examining the project I was surprised at the open and inviting field so greatly in need of a railway. It is without doubt the one weak spot in the transportation facilities of Washington—a gap which should have been filled long ago. A glance at the accompanying diagram is sufficient to show an astonishing state of affairs. The area shaded, and without any existing north and south railway, contains 1240 square miles, or nearly the same as that of the whole State of Rhode Island. The width of the area, or, in other words, of the gap to be filled, is as follows:

	Miles.
On latitude of Sandy Springs.....	21
Sykesville.....	37
Baltimore.....	44
Westminster.....	22
Union Mills.....	17
Gettysburg.....	18

"The length of the area on an air line from the District boundary to Gettysburg is sixty-six miles.

"The air-line distances from town to town, going northward from Washington, are as follows:

	Miles.
District line to Sandy Springs.....	11
Sandy Springs to Sykesville.....	17
Sykesville to Westminster.....	15
Westminster to Union Mills.....	6
Union Mills to Littlestown.....	7
Littlestown to Gettysburg.....	10

Total..... 66

"The actual railway line will, of course, be a few miles longer, probably about seventy-two miles.

"The shaded area in the State of Maryland includes the larger portions of Montgomery county, all of Howard and Carroll, and part of Frederick; in Pennsylvania it includes most of Adams county. As a whole it is highly elevated and healthy, exceedingly fertile and productive, and the people are unusually thrifty, as may be seen by reference to a few official statistics.

"As it is difficult to subdivide the census statistics of counties, I will omit those of the fractional part of Frederick county and take those of the four counties to be directly intersected by the proposed railway.

"According to the census of 1890, the total population of these counties was as follows:

Montgomery.....	27,185
Howard.....	28,993
Carroll.....	34,376
Adams.....	35,486

Total..... 122,040

"In brief, 270,000 people in the District of Columbia and 122,000 people in a country naturally tributary to Washington have no adequate facilities for social and commercial intercourse. They are practically as far apart as if living in separate and distant States. Such a condition of affairs may be termed a commercial absurdity. It is unprogressive, and therefore un-American.

"The assessed valuation of the real and personal property of the four counties was, during the census year 1890, as follows:

Montgomery.....	\$9,827,985
Howard.....	7,915,000
Carroll.....	16,988,448
Adams.....	13,916,357

Total..... \$48,650,790

"This total is less than half the true value of real and personal property of those

counties. In the recent census the assessed values are given by counties as well as by States, but the estimate of the true values are given only by States. For the whole United States the true values are given as two and three-fifths times the assessed values.

"Applying that rule to the four counties, the true value of their real and personal property is \$126,492,054.

"Great as is this valuation, it will be very materially increased by better transportation facilities for the shipment of their products to Washington, and by the new material development and progress which the road will inevitably stimulate.

"As a through line it does not terminate in the woods, but begins and ends at places of national importance, for it connects the national capital with the greatest national military park, made so by an act

ton and Gettysburg may be seen by contrasting the proposed electric line with the existing steam road.

"The customary route at present is by steam via Baltimore and Hanover. The distance is 112 miles. The electric lines will be inside of seventy-five miles, or a saving in distance of at least thirty-seven miles.

"The time by steam road is about four hours. By the direct electric line it will be about two and one-half hours, or a saving of one and one-half hours.

"The fare by steam road is \$3.35. By the electric road it will probably not exceed \$1.50, making a saving of \$1.85.

"In addition to these advantages the electric line will furnish great attractions in scenery, for it will, while passing through a charming and rolling country, be most of the way in sight of the parallel and ever-

pletion of its underground electric system to enter into reciprocal trackage arrangements with connecting roads.

"In brief, there need be no change of cars, but simply a change of motive power at the boundary from the overhead to the underground system.

"A glance at the accompanying diagram will show the choice of routes in this respect south of Sandy Springs.

"There are also two other possible entrances to the city—one by way of Cabin John Bridge and the new electric railway now under construction to that point, and the other by way of Rhode Island avenue over the new electric railway now under construction from Baltimore.

CONNECTION WITH BALTIMORE.

"It is the wish of Governor Brown, of Maryland, who is an earnest advocate of the proposed electric road between Washington and Gettysburg, that Baltimore have connection with it at three different points, viz:

"1. At a point directly west of Baltimore. This can easily be accomplished by prolonging for a few miles the electric roads soon to be built from Baltimore to Ellicott City.

"2. At Eldersburg, in Carroll county. This requires but a short line running westward from the new electric road already in operation from Baltimore to Reisterstown.

"3. At Westminster, by the extension of the road already complete to Reisterstown, as above stated.

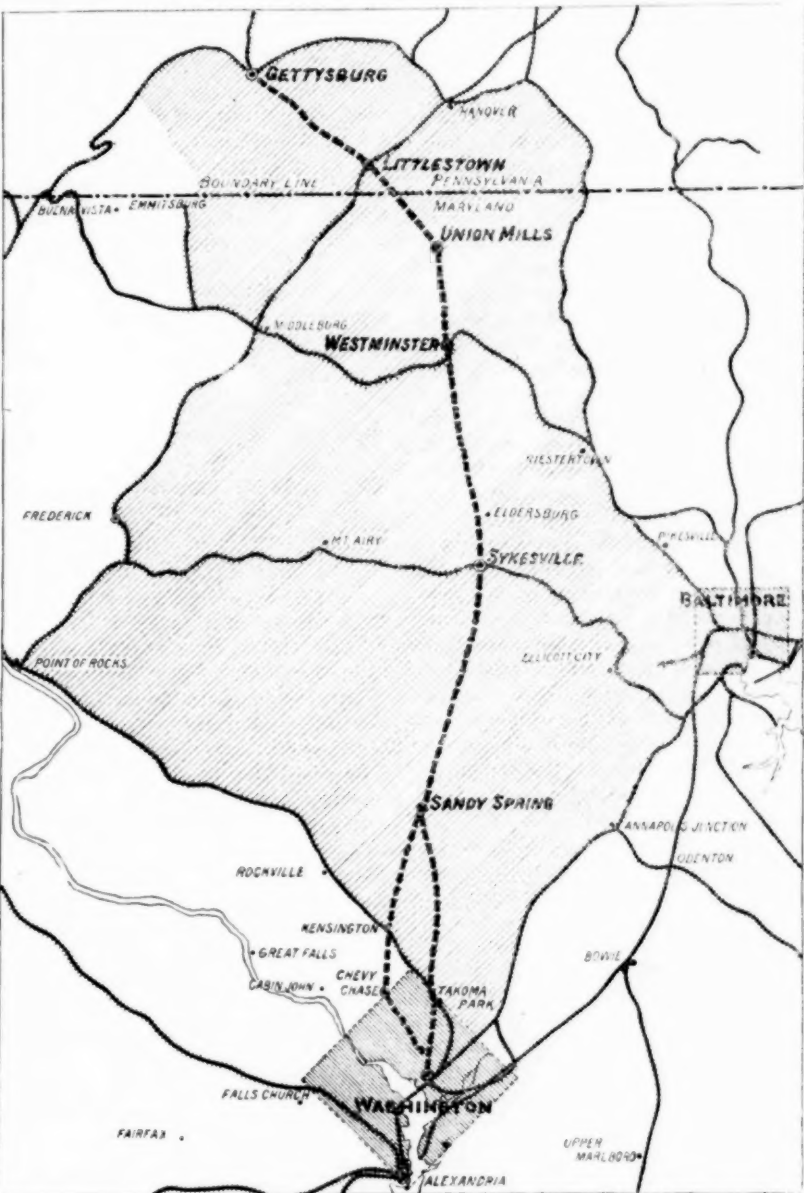
"When one takes into consideration the immense area between Washington and Gettysburg with no north and south railway, the large and thrifty population, the attractiveness of the country and the surrounding scenery, its great wealth, the freight and passenger business already awaiting the opening of the road, the immense local as well as through business, the three proposed feeders from Baltimore, the advantageous entrance to Washington, the fact that each end of the line is a place of national importance and a great resort for people from all parts of the world, the immense saving in time, expense and distance between the two points contrasted with the present roundabout route, the financial success of the project cannot for one moment be doubted. Instead of the road waiting for business, an immense business is already waiting for the road, and, when open, the volume of that business will soon be doubled.

"In this era of electric-railway building, particularly in the suburbs of great cities, it is doubtful if anywhere else in the United States so open, inviting and promising a field can be found as that between Washington and Gettysburg.

"The parties back of the movement are intensely in earnest, and the project is well under way and rapidly taking shape. It is hoped that the north and south trunk line, together with the three branches to Baltimore, will be complete and in operation before the opening of the Baltimore Centennial Exposition in May, 1897."

A Liberal Policy.

The Seaboard Air Line's policy to fully develop the resources of the country which it traverses is very evident from the plans which are being carried out by its management. Several times recently the MANUFACTURERS' RECORD has had occasion to notice this work. One of the latest ideas is to distribute information giving special instructions to growers for the canning of fruits and vegetables. The Seaboard has also decided to offer a valuable prize to the first of its agents who succeeds in having a fruit and vegetable-packing plant established within four miles of his station. Such a policy cannot be too highly commended. Unfortunately, too many railroad companies neglect the policy of education and promotion almost entirely, and appa-



LINE OF THE PROJECTED WASHINGTON & GETTYSBURG ELECTRIC RAILWAY.

of Congress approved only a few months ago.

"Nearly \$4,000,000 had already been spent in monuments and other improvements on this park before the government took charge, and now it is expected as many more millions will be spent in a very few years.

"There is an average of fifty national conventions, scientific, educational, commercial, political, etc., held in Washington each year, attracting delegates and visitors from all parts of the United States and frequently from foreign countries. A large number of these people desire to visit Gettysburg. In addition, private parties of tourists, Grand Army and Confederate veterans and others may be seen upon the battlefield nearly every day in the year. The number will double when the transportation facilities are adequate.

"How great will be the saving of distance, time and expense between Washing-

attractive Blue Ridge mountains.

"A very important factor in the success of a suburban road is the right entrance to the city to which it is tributary. Fortunately, the electric cars coming from Gettysburg can, under recent legislation, enter the very heart of Washington, pass through the hotel centres, cross Pennsylvania avenue and go to the Centre Market and the Pennsylvania Railroad depot.

"More than this, they have the choice of two such entrances to the city—one by way of the Rock Creek Railway, U street, and thence down 9th street, and the other by way of the Brightwood Railway, and thence down 9th street. Later on, when the new underground electric road is completed down Connecticut avenue and F street, they can enter by that route.

"In other words, the act of Congress of August 2, 1894, authorizing the Metropolitan Railroad Co. to change its motive power, requires that company on the com-

rently look upon the merchant or farmer who depends upon them for transportation facilities simply as a source for obtaining so much business. If the Seaboard Air Line continues to originate and carry out such plans as it has been working on it can be safely predicted that within a very few years its business will be greatly increased by the addition in population to towns along its route and by the many new enterprises encouraged by its policy.

A 75-Mile Line.

The project to build a railroad line between Montgomery and Camden, Ala., has reached a point where Montgomery people have been called upon for stock subscriptions to assist in building the road. In a letter to the MANUFACTURERS' RECORD President Sol. D. Bloch, of Montgomery, writes that the Mercantile Trust & Safe Deposit Co. of Baltimore has agreed to act as trustee for a bond issue of \$12,500 per mile on seventy-five miles of the road, and that a syndicate is now negotiating with the view of constructing the line for the amount of this bond issue. It is also understood that ex-Governor Jones, of Alabama, has become interested with Mr. Bloch, and that construction work will begin at an early date.

To Develop a New Seaport.

The project to build a railroad line from Southport, N. C., to the West has reached a point where several townships have voted in favor of taking stock in the company. Mr. E. B. Stevens, of Southport, vice-president of the Southport & Western Company, writes the MANUFACTURERS' RECORD that it is now proposed to build this road from Greenville, S. C., to Southport, a distance of about 240 miles. He claims that several capitalists from Chicago have become deeply interested and control the present company, and that surveys are to be made at once with a view to beginning construction at an early date.

The harbor at Southport, which is at the mouth of the Cape Fear river, is a very excellent one. It is about twenty miles from Wilmington, and only needs railroad facilities to make it an important shipping point. If the railroad is built as intended it would give the cotton-manufacturing section in the Piedmont region of South Carolina a new outlet to the seaboard and also form an important connection with the Southern and Seaboard Air Line systems. Some time ago, as readers of the MANUFACTURERS' RECORD are aware, a scheme was projected to build a line from Greenville to Knoxville, Tenn. Should this be revived in connection with the road to Southport, and both be built, a new trunk line from Tennessee to the Atlantic seaboard would be the result.

Resigned His Position.

A dispatch from Atlanta announces that Mr. Joel Hurt has resigned his position as president of the Consolidated Street Railway Co. of that city, and that Assistant Manager Woodruff will probably be his successor. Since Mr. Hurt has held the position he has placed this company on a sound financial basis by a plan of reorganization which has been ratified by the greater portion of its security-holders, and the fact that Atlanta has one of the best street railway systems in the country today is largely due to his efforts.

Steamship Line to Europe.

A dispatch from Pensacola, Fla., states that the Louisville & Nashville Railroad Co. is interested in the establishment of a new steamship line between that port and Europe, which will probably be put in operation this winter. The railroad company is now contemplating extensive improvements at that port with a view to developing export business.

AN ALLIANCE AGAINST RAILROADS

Demand for Lower Freight Rates.

SOUTHERN TRANSPORTATION ASSOCIATION, CHARLESTON, S. C., July 27.
Editor Manufacturers' Record:

For a long time desultory efforts have been made by individual organizations to force the Southern Railway and Steamship Association, or some of its members, to give better service and fairer rates, and while in some cases they have been apparently successful, the railway association, by its greater "staying powers" and longer purse, has been able in every case to tire out its opponent and continue its unjust and illegal practices.

We must take a lesson from them and make our organization as complete and cover the ground as thoroughly as they do. When we have done this we shall be in a position to demand and will receive fairer and more just treatment. If we are not brave or loyal enough to oppose organization against organization, we must be content to give an exorbitant proportion of our earnings to the railroads, to enable them to pay interest on millions of dollars for which the South never received any benefit whatever.

If the railroads of the South were conducted with a view of permanently increasing the value of the property, the Southern Transportation Association would have little or no need of existence, for it is unquestionably the policy of any railroad, rightly conducted, to do everything in its power to build up and develop the country through which it runs, and this can only be done by giving to all ample facilities for shipment, and giving such rates as will enable the producer or shipper to market his goods at a profit. Instead of such a wise policy, the Southern roads, by combination, have prevented all competition, and by discriminations in favor of certain favored localities have in some cases almost ruined important industries in other sections; and while competition in production has greatly reduced the selling price of many products, the cost of transportation has been kept up, although the bulk of produce carried has been enormously increased.

If the Southern railways were owned by Southern people, self interest would excuse their being operated in the interest of the South, but owned and controlled as they are by foreign capital, and in the hands of speculators who look for their profits not to the legitimate earnings of the roads, but to manipulation of its stock and bonds, there is no hope of voluntary liberal action on their part; and if we are to ever get as low and equitable rates as are now given by the railroads of the Eastern and Middle States, we must form an organization that shall represent every commercial interest in the South. All should join it, whether they have a grievance or not, for in the complex organization of modern business no one interest can suffer without in some degree affecting all other interests, nor can any one interest prosper without in some degree sharing its prosperity with all others.

Under the able control of a wise executive committee the Southern Transportation Association, working conjointly with the National Transportation Association, will, if properly supported, be able to greatly improve the railroad situation at the South.

N. H. EGGLESTON, JR., President.

To Lease the North Carolina Road.

The North Carolina Railroad, which is controlled by the State and extends from Charlotte to Goldsboro, 223 miles, is attracting much attention at present from the fact that the Southern Railway Co. system is making an effort to renew its lease for ninety-nine years. It is now operated by this company under lease, and it is under-

stood if again secured will form a part of the new route of the Southern to its tide-water terminals at Norfolk and Portsmouth. A dispatch from Raleigh, N. C., states that the Seaboard Air Line may also negotiate with the view of leasing the North Carolina road. Thus far the directors of the company have taken no action. Governor Carr in an interview states that the road will be turned over to the company which offers the highest rental for the property.

Two Electric Projects.

The project to build an electric railroad from Jacksonville to Tampa, Fla., has reached a point where a company has been organized with the following officers: President, Crosby Thompson, Cleveland, Ohio; vice-president, E. M. Hammond, Orlando, Fla.; secretary and general manager, T. J. Appleyard, Sanford, Fla.; treasurer, O. C. Ringle, Cleveland, Ohio; land commissioner, Geo. H. Peckwood, Sr., Maitland, Fla. Mr. Appleyard, secretary and general manager, can give all information desired. In connection with the Jacksonville & Tampa line several of the same parties, it is reported, are interested in a scheme to build an electric street-railway system in and around St. Augustine; also to establish an electric-light plant in that city.

Railroad Notes.

C. H. HAMMETT has resigned his position as vice-president of the Galveston, Le Port & Houston.

O. L. MITCHELL has been appointed division agent for the Queen & Crescent system at Birmingham, Ala.

THE Nashville, Chattanooga & St. Louis Railroad Co. has decided to place an additional steamer on the Tennessee river to accommodate its business on that river.

THE work of changing the Augusta Southern Railroad to broad gage has been completed, and trains are now being operated between Augusta and Sandersville, Ga.

THE receivers of the Memphis & Charleston Railway Co. have received permission to purchase 200 box cars for use upon that line. R. B. Pegram, Jr., at Memphis, is superintendent.

A DISPATCH from Washington, D. C., states that the Washington & Georgetown Railway Co. has secured control of the Rock Creek electric road, which is about seven and a-half miles long.

MR. F. S. HAMMOND has resigned the position of general freight and passenger agent of the Kansas City, Watkins & Gulf Railroad, and Vice-President Thompson will act temporarily in his place.

THE Chesapeake & Ohio Railroad Co. has been testing electric headlights on several of its locomotives. The arc lamps are used, the dynamos being located on the locomotives and operated by steam-power.

THE report of the Baltimore & Lehigh Railway Co. for the last eleven months of the year ending June 30 shows net earnings of \$24,403.43. The roadway has been improved and money spent in other betterments.

MR. J. W. GAULBERT has been elected president of the Kentucky & Indiana Bridge Co., which controls one of the principal railway entrances into Louisville, Ky. Mr. Gaulbert succeeds Mr. Bennett H. Young.

A DISPATCH from Clarksville, Tenn., states that 75,000 barrels of potatoes and 22,000 crates of strawberries were shipped over the Memphis branch of the Louisville & Nashville this season, one grower shipping 8000 barrels of potatoes alone.

A LARGE portion of the Southern Railroad between Charlotte and Danville has been relaid with heavy steel rails, and is now considered by experts to be one of the finest sections of railroad in this country. This work is simply in line with other

improvements which the Southern is making on all parts of its system.

MR. C. B. WARRAND, of Savannah, Ga., has been appointed immigration agent for the Plant Railway & Steamship Co. Mr. Warrand is an authority on Southern resources, and many of his articles have appeared from time to time in the MANUFACTURERS' RECORD.

AN indication of the increase in vegetable shipments from the South, especially Arkansas, is shown by a report from Fort Smith, which states that a solid train of thirty carloads of new potatoes was sent from that place by the Missouri Pacific system to Kansas City recently.

THE bondholders of the Savannah & Atlantic Railroad Co. have finally decided to enter the reorganization plan of the Central Railway of Georgia. It is understood that this is the last line to agree to the terms of reorganization, and that the plans can now be carried out immediately.

ONE of the special features at the Atlanta Exposition promises to be that of the Central Railroad of Georgia, which will largely consist of fruit grown in the section along the line of the railroad. Traffic Manager Shellman is taking an active interest in the exhibit, which will probably be sent to the Tennessee Exposition after that at Atlanta closes.

THE Jacksonville, Mayport & Pablo Railroad is to be sold at auction under the orders of the court on September 2, and will probably be bought in by the bondholders. This line, which is operated by steam power, extends from Jacksonville, Fla., to Pablo Beach, a distance of about seventeen miles. Its officers are Archer Harman, president, J. N. Stockton, secretary and treasurer, Jacksonville.

A DISPATCH from Washington states that the Metropolitan Railway Co.'s Ninth-street branch has been opened for traffic. This line has been constructed with a view of using the underground electric conduit system, and it is stated that thus far it has proved very successful. The road was built under the supervision of Mr. A. N. Connett, chief engineer of the company, formerly chief engineer of the Baltimore City Passenger Railway Co.

THE importance of New Orleans as a railroad centre is becoming more and more noticeable. In addition to improvements which have been made by the Louisville & Nashville and Southern Pacific systems by building yards, terminals, etc., the Illinois Central has decided, it is stated, to erect two roundhouses near the city, also to extend its yard facilities. The MANUFACTURERS' RECORD has already noted the New Orleans & Western project, which really means the further development of the city as an exporting point, since the terminals of the new line at Battleground plantation, on the Mississippi river, are practically in the suburbs.

THE Woodstock Iron Works, of Anniston, Ala., has elected the following officers: J. D. Probst, of New York, president; H. Atkinson, vice-president; J. W. McCulloh, general manager; W. L. Doane, secretary and treasurer.

THE New York Herald's Japan correspondent reports that Mr. F. B. Nichols, vice-president of the Howard-Harrison Iron Co., of Bessemer, Ala., is now in Japan seeing about the contract for about \$700,000 of water pipe for which this company made a bid some time ago.

THE MANUFACTURERS' RECORD is in receipt of an interesting pamphlet entitled "Conscientious Claims of Greenville, S. C." The position of Greenville as an industrial and business centre is admirably covered. Copies of this pamphlet can be obtained without cost from Mr. A. H. Dean, chairman of the special committee of the city council, for whom it was prepared.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department, on pages 13 and 14.]

Want to Come South.

The MANUFACTURERS' RECORD is in receipt of a letter from a New England firm in which they ask to be put in communication "with reliable men in the South who are doing a successful business in making colored staple cotton goods of low and medium numbers of yarn, like ticks and blue drills." This firm writes that the owners of a Northern mill, which has been engaged upon this character of work and which has spent about \$300,000 in new machinery within three or four years, especially adapted to the working of this character of goods, desire to move their plant to the South. They wish to communicate with a Southern mill successfully making this grade of goods which would like to enlarge its business, or to move this machinery to a new mill to be built in the South, and would be willing to take stock to the entire value of the machinery. Special emphasis is laid upon the fact that this is new, first-class machinery. Letters from those who wish to correspond with these people can be addressed to "X. Y. Z.," care of MANUFACTURERS' RECORD.

Textile Notes.

THE Athens Knitting Mill, recently completed, has begun operations at Athens, Ga.

It is expected that the Richlands Cotton Mill, which is now being completed at Columbia, S. C., will be placed in operation about September 1.

A DISPATCH from Spartanburg, S. C., states that material is now being hauled for the Spartan Mill No. 2, and that work will begin on it in the near future.

THE latest report regarding the Dwight Manufacturing Co.'s extensive plant at Alabama City, Ala., is to the effect that it will be in operation by November 1.

It is understood that Mr. Thos. M. Swift, of the Swift Cotton Mills at Elberton, Ga., has secured a power site at Heardmont, near Elberton, and will erect a spinning mill.

A FEATURE of the Electric Cotton Mill Co.'s plant to be built at Athens, Ga., will be the use of electric motors for operating the machinery. The current will be generated by water-power, and it is expected that 300 horse-power will be used at first.

A DISPATCH from Weldon, N. C., states that still another cotton mill is projected at the locks of the Roanoke Navigation & Water Power Co.'s canal. This is located near the canal of the Roanoke Rapids Power Co., and will furnish a head of water sufficient to operate an extensive plant.

THE cotton-mill enterprise at Salisbury, N. C., will be carried out under the title of the Kesler Manufacturing Co. Among the active promoters are Mr. P. H. Thompson, M. B. McCanless and J. S. McCubbins. It is expected to erect a mill costing between \$50,000 and \$75,000 at first, with a view to making additions later.

THE Granby Cotton Mill Co., the latest textile organization at Columbia, S. C., has selected the following officers: W. B. Smith Whaley, president; A. C. Haskell, vice-president; William Barnwell, secretary and treasurer. Mr. Whaley is one of the best known mill engineers and constructors in the country, and it is safe to say that this plant, which is to contain 30,000 spindles, will be one of the most modern and complete yet erected in the South.

ACCORDING to a report in an Augusta paper the Algernon Cotton Mill, is to be placed in operation with modern equipment. Mr. Stewart Phinizy, who is one of

those interested, informs the MANUFACTURERS' RECORD that nothing definite has yet been decided upon. This mill is one of the plants located on the Augusta Canal, and it is understood will use between 750 and 1000 horse-power when placed in operation.

Chances for Baltimore Capital.

ROCKPORT, TEXAS, July 13.

Editor Manufacturers' Record:

I fear that Baltimore scarcely appreciates the great benefit a banking firm of that city has conferred upon Southeast Texas by providing money to open Aransas Pass at Rockport. Every town from San Antonio to the gulf is rejoicing at the closing of this great contract for deep water at Rockport and the Pass.

The enterprises that are talked of as being likely to be at once constructed are the following: The projection of the Missouri, Kansas & Texas Railway via Victoria to Rockport; the construction of an electric road all along the bay front of the peninsula from the northern point via Fulton to Rockport, and thence to Aransas harbor; the building of electric-light and ice plants at Rockport, and the placing of a line of steamers from Rockport to the Mexican and South American fruit ports.

This coast country, certainly one of the coolest and healthiest in the world, is now destined to a rapid advance, and Baltimore money and Baltimore enterprise should take an additional hand in its great progress. All Southwest Texas feels kindly to Baltimore, and now is the time for Baltimore money to make its power felt.

JAMES B. SIMPSON.

Shipping Southern Furniture North.

For years the South has bought nearly all of its furniture in the North or West, and the MANUFACTURERS' RECORD has persistently urged the establishment of furniture factories to supply the home demand. One company in Charlotte, N. C., the Elliott Furniture Co., has turned the tables, and is pushing its product into Northern markets. In response to a letter of enquiry as to its sales in the North the company writes the MANUFACTURERS' RECORD as follows:

"We have been shipping almost the entire product of our factory to the Eastern States. Our territory embraces Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Delaware, Pennsylvania. We sell in almost every town in those States, that is, the principal places. Our product amounts to almost \$100,000, and most of it goes to these States. The furniture manufacturers of the country have an exposition in New York city twice every year. We display our samples there, and have done so for five years, right alongside of the furniture made all over the United States, and we get all the business we can do. We are now behind with our orders taken at the January exposition. This is not always so, but owing to the severe weather last winter lumbermen could not cut stock, and hence we had some trouble in securing lumber in the winter and spring, which accounts somewhat for our being behind.

"We are the pioneers of this business in the South, having commenced it by showing two or three oak beds and one cheap suit at the New York exposition, and our present business is the outcome of this experiment. By last Monday's mail we received orders for thirteen carloads of goods, and three of these go to Maine to a dealer who writes us for photographs and electrotypes, saying that he proposes to run our goods for all they are worth in his territory."

MR. W. P. THOMPSON, of the National Lead Co., No. 1 Broadway, New York, writes to the MANUFACTURERS' RECORD that the report published in a number of papers that he has purchased iron-ore lands near Harper's Ferry, W. Va., is incorrect.

COTTONSEED OIL.

This department is open for the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

The Market for Cottonseed Products.

NEW YORK, July 30.

The change that has occurred in the cotton-oil market, which was duly chronicled in our last, has developed and stronger prices prevail. The general market conditions which are now the ruling features of this centre have rapidly spread, and reports from all sections of the South announce advanced quotations. A clear advance of 4 cents per gallon from quotations given forth less than ten days ago obtains at this writing with regard to prime summer yellow, and with undoubted evidence that the leading companies have been in the market for the procurement of low-priced oil from independent crushers immediately prior and subsequent to the recent upward movement of values, together with the fact that oil stocks in the aggregate may prove to be incommensurate with needed supplies until new oil becomes available, the indications are that present prices will be maintained, although consumers and exporters generally view events as being the outcome of preconcerted action on the part of the great companies, and not those of a healthy trade development. Good off grade yellow is quoted at 27½ to 28 cents, while for prime summer yellow 30 cents is quoted, at which latter figure sale have been effected, the relative positions of the two varieties with regard to values being more divergent than heretofore, limited supplies of the prime grade establishing the quotations referred to. Bulk crude, also in accord with the prevailing market features in the great consuming and shipping centres, is held at a much higher range of prices. Crude in barrels has been disposed of for export on a 25 cent basis, while white oil, although firmer, remains unchanged. English manufactured cotton oil, according to late cablegrams, has been stimulated by events on this side of the Atlantic and advanced quotations are announced. The demand for Egyptian cottonseed, however, exhibits a declining tendency, but signs are not wanting that increased interest in American cotton oil will shortly obtain, notwithstanding the upward tendency of this market. With the prospect of tallow being reduced to 4 cents, the consumption of cotton oil in soap manufacture will be materially restricted; nevertheless, current needs in other lines, notably in lard compounding and exports generally, will sufficiently occupy the attention of the trade for the time being. At this writing the demand from packers is of a dull character; nevertheless, the extraordinary slump in the oleostearine market is of such a character that compound-lard manufacture will doubtless receive an impetus, thus creating an improved demand for oil. A comparatively novel feature in the business consists in the marked development of cotton-oil consumption in Spanish-speaking countries in Central and South America, as evidenced by recent substantial exports. Sales reported aggregate 75,000 gallons off-summer yellow at 26¾ to 27½ cents, and 50,000 gallons prime yellow at 27½ to 30 cents. Current quotations are as follows: Crude, prime, 24 to 25 cents; crude, off quality, 23 to 24 cents; prime summer yellow, 29 to 30 cents; off prime summer yellow, 27½ to 28 cents; butter oil, 29 cents; white oil, 31 cents, and soap stock, 1¼ to 1½ cents per pound.

Cake and Meal—With light stocks and firm quotations, together with a fair export demand, the outlook for an auspicious opening of the new cake trade promises well. Prime American cake is quoted in the London market at £5 10s.

per ton, while New Orleans quotations are \$19.50 per ton. It will interest cotton-oil millers to know that there has been recently patented in England a device which consists of a revolving-door cage, which makes an open door between seed storehouses—that most fertile cause of spreading fire—an absolute impossibility. Exports of cake and meal amounted to 2000 tons to Germany and England each.

Cottonseed-Oil Notes.

A COMMISSION was issued last week to the Williamston Oil Mill, of Anderson county, S. C. The capital stock is placed at \$20,000.

THE Texas Cottonseed Meal & Oil Co., of Kansas City, Mo., was chartered last week. The capital stock is \$20,000. The incorporators are J. L. Grider, M. G. Peters, J. P. Fallon and others.

The Arkansas Cotton Oil Mill Co., at Little Rock, Ark., finished the season's run last week and will close down for the season. The output of the mill this year has been about 720,000 gallons of cottonseed oil.

In a letter from Blacksburg, S. C., it is said: "I am reliably informed that a site has been secured for a cottonseed-oil mill at this place, and that both the lumber to build the mill and the machinery for it have been contracted for. It will operate on this crop."

THE Standard Cottonseed Co., organized last week at Little Rock, Ark., has filed articles of incorporation. The names of the incorporators are J. E. England, S. S. Wassell, Herbert Wassell, N. Williams and Henry A. Schuer. The capital stock of the company is \$1,000,000, and the officers are J. E. England, president; S. S. Wassell, secretary, and Herbert Wassell, treasurer.

THE market for cottonseed products at New Orleans has ruled quiet, as usual at this period of the season. Receivers' prices are quoted as follows: Cottonseed, \$6 per ton (2000 pounds) delivered here; cottonseed meal jobbing at depot, \$17.25 to \$17.50 per short ton and \$18.75 to \$19.00 per long ton for export, f. o. b.; cottonseed-oil, 19 to 20 cents per gallon for strictly prime crude, in bulk 17½ to 18 cents, and 24 to 25 cents for refined oil at wholesale or for shipment; oilcake, \$18.75 to \$19.00 per long ton f. o. b.; foots, 1 to 1½ cents; linters—A, 3 to 3½ cents; B, 2¾ to 2½ cents; C, 2 to 2½ cents; hulls delivered at 20 to 25 cents, per hundred pounds, according to location of mills.

Rich Gold Discoveries Claimed in Alabama.

An Anniston (Ala.) correspondent of the MANUFACTURERS' RECORD writes as follows: "I have just returned from the Arbacoochie district, Cleburne county, where I have been making examinations of recent developments on gold property there. Large quantities of gold have from time to time in the last fifty years been gotten in that section of the State, and gold is found in every portion of the Arbacoochie district. This latest find, however, is pronounced to be the richest and most wonderful yet discovered. One of the old placer miner's pits of fifty years ago was cleared out and deepened, and a true fissure vein was struck of great richness and promise. The dirt and gravel around the vein is full of gold, both fine gold and nuggets, and the ore runs from \$1000 to \$2000 per ton. It is difficult to tell of the prospect, but when I say that one can stand on the mouth of the pit and see with the naked eye seams of gold in the quartz thirty feet away you can form some idea of its richness. Numbers of prospectors and experts are already on the ground exploring and testing, and capitalists both in the East and West will soon be ready to join in developing this section on a large scale."

MECHANICAL.

Domestic Water-Supply System.

A recent invention for raising water has been combined into an effective water-supply system adaptable to use in suburbs of cities, country homes, hotels and summer resorts. The accompanying cut illustrates this system. It was recently brought out by the Erwin Hydraulic Machinery Co., of Milwaukee, Wis. This water-supply system may be efficiently applied for furnishing water in large quantities for irrigation, railroad tanks, etc.

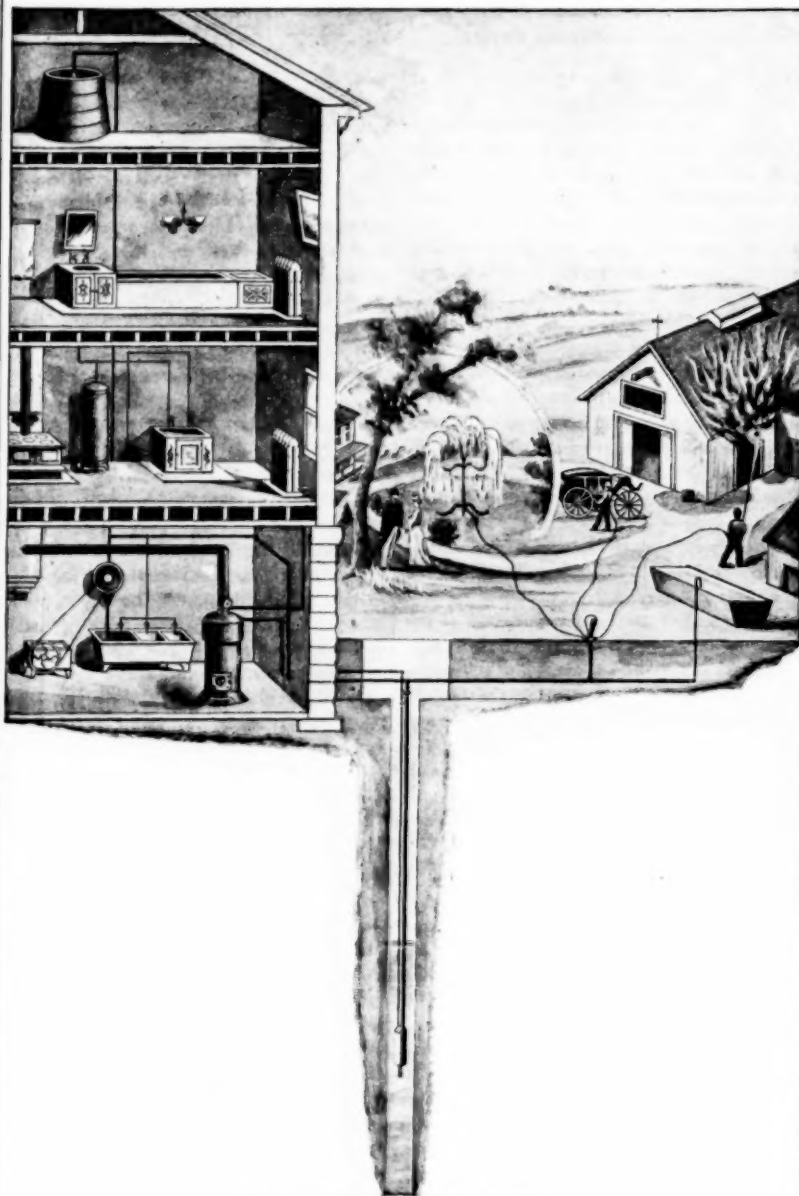
The principle of the invention is a new one, of special interest to mechanics. It does not, as many at first supposed, involve the principle of the steam syphon in any sense whatever, but on the contrary, its action is more analogous to that of the condensing engine and the suction and force pump. Water is induced to flow into the pump by a vacuum produced by the admission and condensation of steam. The pump being filled with water, the water-controlling check-valve drops to its seat, thereby simultaneously opening the inlet steam port, whereby the water is expelled by the direct downward pressure of the steam admitted upon its surface. The water being thus displaced, the steam is condensed by a jet or spray of water, a vacuum is again produced and water is again induced to enter the pump, and the operation described is continuously repeated as long as the supply of steam is maintained. The pump contains no pistons, piston-rods, packing or delicate or complicated parts to wear out or be cut with sand. All its parts are substantial and durable and require no more attention than an ordinary hydraulic ram.

The smaller size of pump and boiler may be used in ordinary bored wells of two inches in diameter; the pump located as shown in the illustration can be operated successfully in wells of any depth. This pump is of especial value in deep tubular wells. Wood, coal or oil may be used for fuel, and water for the ordinary country home can be supplied at an expense of from five to ten cents per week, thus overcoming at a slight expense one of the chief objections to many suburban-residence locations.

The illustration shows a convenient man-

ner of locating the pump and boiler, by which arrangement the same boiler may be used for heating the house and raising water. By attaching a small motor to the water pipe, the pump is converted into an engine, which may be used as a motive

power for driving a variety of small machinery for domestic use, such as churns, washing machines, grindstones, cream separators, etc. When thus operated the same water may be returned to the pump and repeatedly used. The same boilers are also



DOMESTIC WATER SUPPLY SYSTEM.

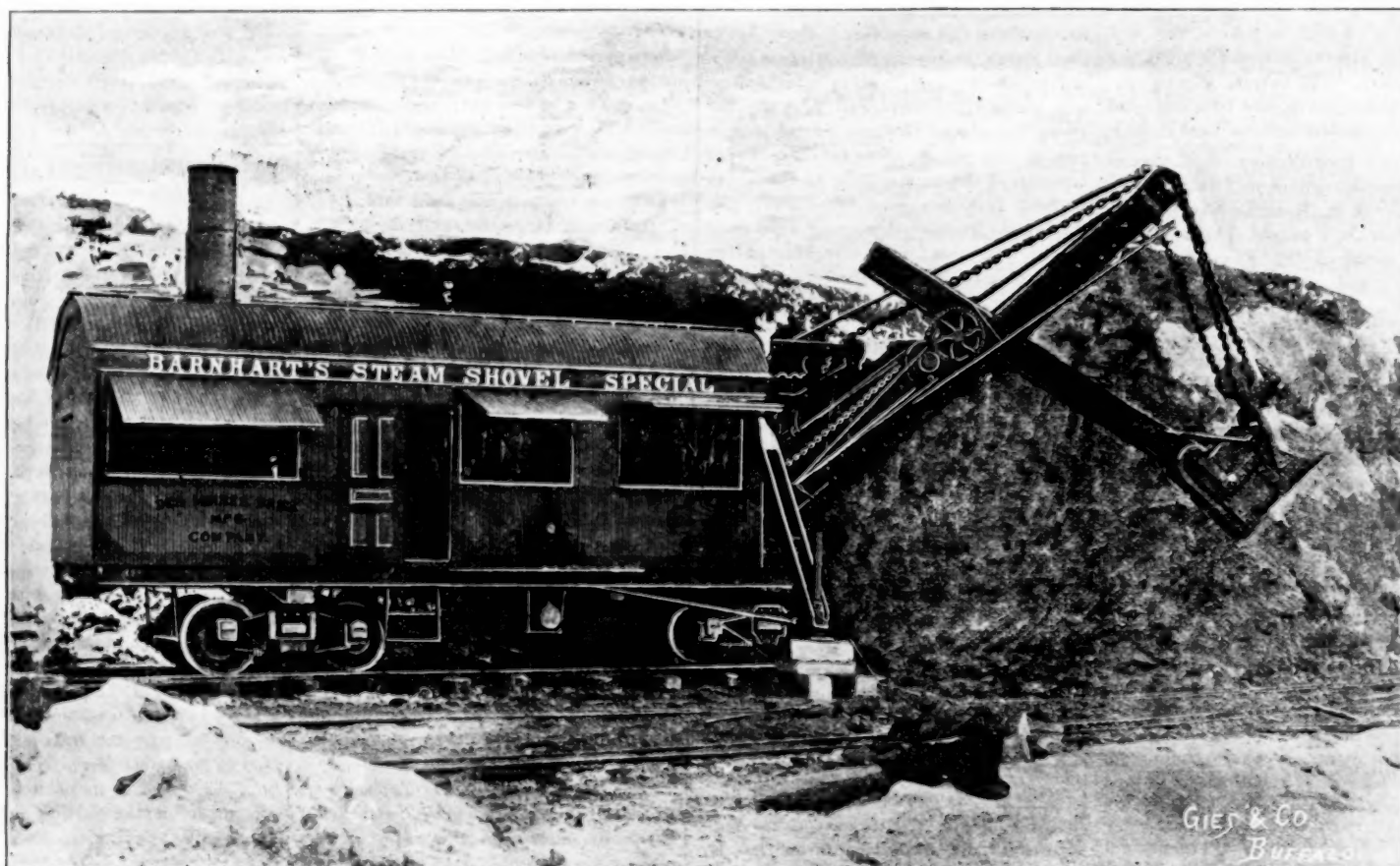
frequently used by farmers for steaming feed for stock. This system combines water, heat and power, as well as fire protection, supplying the conveniences, comforts and luxuries of the city to the country home.

Barnhart Steam Shovel.

The accompanying cut represents Barnhart's style AA 2½-yard steam shovel. The cut was taken from a photograph of the machine in hard shale rock at Des Moines, Iowa. This machine has recently been thoroughly improved and strengthened in all its parts. The extremely hard work of the Chicago drainage canal, in which the machines are kept at work twenty-four hours per day, and in some instances seven days per week, developed some weaknesses that were not supposed to exist, and in fact which did not exist under ordinary circumstances. In order to be able to stand constant use both night and day for long periods at a time a machine must be extremely well proportioned and made of the best of material, and the slight additions made to this machine brings it up to the requirements of such exacting service.

Heldmaier & Neu, Weir & McKechney and Angus & Gindele, of the Chicago drainage canal, have these improved steam shovels in use. The result of their constant operation in the extremely hard material of the Chicago drainage canal is very gratifying both to the users and manufacturer, and would seem to be conclusive proof that all the weak points had been eliminated. The officials of this company are nearly all men who began at the bottom round of the ladder, having seen many years' service as steam shovel and dredge engineers, during which time they operated nearly all makes of excavating machinery. This experience has been very valuable to the company, the members of which, knowing the requirements from actual experience, were much better prepared to meet them.

The Marion Steam Shovel Co., of Marion, Ohio, which is the builder of these shovels, is busy filling orders for different classes of machinery which it manufactures. This company through the dull times of the past two years has had orders sufficient to keep a large force of men at work, the least



THE BARNHART STEAM SHOVEL.

number of men employed at any time during the depression being 150. As the business of the country continues to improve this company is constantly putting on more force in order to promptly fill its orders. At present it has a number of unfilled orders on hand. The reputation of its machinery is such that it was enabled to do a large business all through the recent panicky times. This company manufactures a full line of steam shovels and dredges suitable for all classes of work; also Barnhart's ballast unloaders, and in fact a full line of machinery for earth displacements of all kinds.

There are in use on the Chicago drainage canal twenty-two of its large steam shovels. Recently the company shipped the Lake Erie & Western Railway Co. two steam shovels and four ballast unloaders; Western New York & Pennsylvania Railroad Co., one steam shovel; Sayre & Fisher Co. and E. Furman, of Sayreville, N. J., one each; Jenkins & Hoefler, of Georgets-ville, Ohio, one shovel; the Chase Brick Co., of Milwaukee, Wis., one shovel, and several have recently been shipped for brick-yard service in and around Chicago. Dredging machinery has been shipped to Oregon, Idaho, Indiana, Illinois, California and other parts of the country.

Excellent shipping facilities are enjoyed by this concern having connection in its yards with five of the leading lines of railway. Its shops are modern in every detail. These shops are equipped with everything in the way of machinery that will improve the quality or reduce the cost of their output. The power used is electricity, which is generated in the power-house and transmitted to the many departments by the use of motors. With such facilities the patrons are assured prompt service.

Power Hammer for Light Work.

A light power hammer has been perfected by Scranton & Co., of New Haven, Conn., the well-known builders of power hammers. It is similar in design to the regulation hammers made by this firm, and is built to fill a demand where a light quick-running hammer is required. The hammer is small in all parts, evenly balanced, and so constructed that it requires but one horse-power to run it.

Its details and usefulness are indicated by the following facts: The size of base is



POWER HAMMER FOR LIGHT WORK.

26x26 inches; diameter of driving pulley, ten inches; size of belt, three inches; average number of blows, 400 per minute; adapted to work stock from 1/4-inch to 1 1/4-inch; height from foundation to centre of shaft, five feet eight inches; extreme size of dies admitted between the ways, 5x6 inches.

Like Scranton & Co.'s other hammers, this hammer is of the upright pattern, taking the power at the top of the hammer, thereby decreasing the danger and inconvenience of belts running near the floor, where they are in the way and gather grease and dirt.

The ram is guided both front and back

by two upright ways, which reduces the friction and requires the ram at all times to strike an absolutely accurate blow.

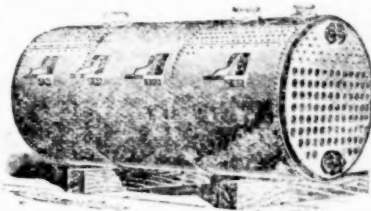
The adjustment of the ram is made by one turn of the wrench, and the blow is at all times under the control of the operator to start or stop instantly.

The anvil is separate from the frame, which greatly reduces the jar on the hammer.

This firm has had over twenty years' practical experience in the use and manufacture of power hammers, and is prepared to furnish hammers for all classes of forging, including file and cutlery work, carriage hardware, plating, drawing and all kinds of general blacksmith work. They will furnish promptly circulars with full information regarding these hammers to all interested in this class of work.

Keeler High-Pressure Boiler.

We present herewith a cut of the standard high-pressure boiler as manufactured by the E. Keeler Co., Williamsport, Pa. These boilers are made in three sheets to the boiler, either with or without domes. The company has recently received orders for fourteen 150 horse-power boilers this style, thickness of shell being seven-sixteenths of an inch; heads, nine-sixteenths of an inch, with welt strap joint straight seams, giving within 10 per cent. of strength of solid plate, and Eclipse flanged man-holes. The heads are braced with 4x4 T



THE KEELER HIGH-PRESSURE BOILER.

irons extending across, above and below tubes, and from these crowfoot braces extend back on the shell or sides of the boiler.

The material used throughout is the best fire-box steel, with tubes of best charcoal iron. These boilers are designed to carry 125 pounds pressure, and, while only rated at 150 horse-power, have developed under test 180 horse-power. The Keeler Co. is making a specialty of high-grade boilers, and is furnishing some of the largest steam users in the country. Having recently furnished its plant with latest labor-saving tools, the company possesses one of the best equipped shops in the country.

To Drain Muck Land.

Mr. W. W. Russell, of Orlando, Fla., informs the MANUFACTURERS' RECORD that arrangements are being made to drain what is termed the San Sebastian saw-grass lands by constructing a system of canals embracing sixty-four miles in all. Some time ago Mr. A. O. Russell, of the United States Printing Co., of Cincinnati, became interested in this territory, and with Mr. W. W. Russell, his son, purchased about 112,000 acres. Of this there is, as shown by the report of the engineers recently made, about 78,000 acres of muck land, on which the muck is three feet or more in depth. Of the remainder the greater portion is pine land of fair quality. There is also on the purchase a body of cypress timber. The land lies between the Indian river and the head of the St. John's. In a distance of five miles from it to the Sebastian river, a tributary to the Indian river, there is a fall of from nineteen to twenty-one feet, ample to enable the entire tract to be drained successfully by the canal system. When reclaimed this body of land, it is claimed, will be equal in quality and producing capacity to the best of the reclaimed muck lands of Florida.

Bids are being solicited for the drainage system.

PHOSPHATES.

A Big Phosphate Company.

A deal has just been completed at Atlanta, Ga., in which, according to the Constitution, three of the largest and oldest phosphate-manufacturing companies of the State have consolidated their business interests under the title of the Southern Fertilizer Co., with headquarters at Atlanta. The companies comprising the Southern Fertilizer Co. are the George W. Scott Manufacturing Co., of Atlanta; the Georgia Fertilizer Co., of Rome, and the Comer-Hull Co., of Savannah, the combined capital stock represented being nearly \$1,000,000. The paid up capital is \$850,000, and an application for charter is now on file.

Information About Phosphate and Pineapples Wanted.

MIDDLESBURG, KY., July 24.

Editor Manufacturers' Record:

I have been a constant reader of your paper for six years, and through its influence have, in connection with another gentleman, been induced to purchase 1200 acres of phosphate land in Southern Florida. I read with much interest the paper under the head "The Florida Rock-Phosphate Deposits," by G. M. Wells, of Ocala, Fla., in your issue of July 19, and would be pleased if that gentleman would give us another paper on land and river-pebble deposits in Southern Florida. I would be glad if some one would tell us through the MANUFACTURERS' RECORD what it will cost to clear, fence, prepare the land and put out pineapple orchards and the yield when in bearing per acre. We have twenty acres of fine pineapple lands well located which we want put out. F. GRIDER.

Phosphate Markets

OFFICE MANUFACTURERS' RECORD, BALTIMORE, AUGUST 1.

There has been but a light volume of business transacted in the phosphate market during the past week, and the demand is moderate. Manufacturers are not buying largely, the fertilizer business being rather quiet. The reports from points of production in South Carolina are favorable, and the development of phosphate is being vigorously pursued both by land and river miners. River miners are making some heavy foreign shipments. The market at Charleston closed steady, with crude rock quoted at \$3, hot-air-dried \$3.50 and ground rock \$6.50, all f. o. b. The industry in Florida shows very little activity at the moment, and in the hard land-rock region there are very few log-washers at work. The markets in Europe are overstocked with phosphate, and the demand from that source is light. Holders of rock in Florida are firm in their views, and, although receiving a number of bids, refuse to sell except at a fair margin of profit. Last sales of land rock reported were at 7d. abroad, equal to about \$4.50 at the mines. The only arrival at this port last week was the schooner Agnes Manning with 930 tons of phosphate rock from Bull river, S. C. The following charters are reported in the local market: Schooners Maggie Lawrence and Douglass Gregory, Ashley river to Baltimore; schooner Merom, Beaufort, S. C., to Baltimore, and Nellie W. Howlett, Ashley river to Baltimore. Freights in New York were more active at the close of the week, and the following charters are reported: A schooner, 765 tons, from Coosaw to Elizabethport, N. J., at \$1.80; a schooner, 881 tons, from Port Royal to Baltimore at \$1.75; a schooner, 333 tons, from Charleston to New York on private terms; a bark, 746 tons, from Philadelphia to Key West with coal at \$1.40, and Port Tampa to Philadelphia with phosphate rock at \$2.25; a schooner from Philadelphia to Norfolk at 80 cents, and a British steamer, 1306 tons, from Savannah to Hamburg on private terms.

FERTILIZER INGREDIENTS.

Trade during the past week has been dull, with a light demand from nearly every point. Prices are easy at \$1.60 for blood, \$1.40 for concentrated tankage, and \$1.50 and \$1.55 for hoof meal, all f. o. b. Chicago. Messrs. Thos. H. White in their circular for July say: "A heavy business in ammoniates was done between the 1st and 8th of July in anticipation of the restoration of freight rates, and the market has been very quiet since. Buyers in the wheat section are occupied with their fall trade, and not interested in current offerings. The demand from the South is yet small; tone weak."

The following table represents the prices current at this date:

Sulphate of ammonia, gas.....	\$2 75@	\$ —
Sulphate of ammonia, bone.....	2 65@	—
Nitrate of soda.....	1 75@	—
Hoof meal.....	1 80@	—
Blood.....	1 90@	1 95
Azotine (beef).....	1 80@	1 85
Azotine (pork).....	1 80@	1 85
Tankage (concentrated).....	1 70@	1 75
Tankage (9 and 20).....	1 65	and 10
Tankage (7 and 30).....	15 50@	16 00
Fish (dry).....	21 00@	—
Fish (acid).....	15 00@	—

CHARLESTON, S. C., July 29

The past week has been rather quiet for the phosphate market. The movement of rock along the water-front to local works is not so brisk, though the coastwise shipments hold out fairly well. Interior points of consumption are buying in larger lots at present. European shipments by the river companies are quite good, and they are pushing their mining actively. Several land companies that shut down some time back are at work again. Prices are \$3 crude, \$3.50 hot-air-dried and \$6.50 ground rock f. o. b. Charleston. The shipments by water for the week were: T. W. Dunn, 950 tons for Weymouth, Mass.; A. B. Bacon, 520 tons for Cooper's creek; M. J. Lawrence, 550 tons for Baltimore; while in port and loading are the R. S. Derby, Grace Andrews, Fannie Reiche, M. L. Patton. The coastwise shipments since September 1 were 93,907 tons crude, 1,405 tons ground rock, against 121,356 tons crude, 4837 tons ground rock for same date last year.

Phosphate and Fertilizer Notes.

THE steamship Louisiana arrived last week at Port Royal, S. C., and is now loading for Liverpool, England, with phosphate and cotton. She will take out 3000 tons of phosphate to be used as ballast during her trip. The Louisiana sails on the 3d inst.

Two large lighters loaded with iron for the Peace River Phosphate Co.'s railroad running from Arcadia to Liverpool have arrived at Charlotte Harbor, Fla. Hereafter the company will ship their output over this line to Liverpool, whence they will barge it to Boca Grande, which is the most southerly deep-water gulf terminus on the mainland of Florida.

THE Massachusetts Phosphate Co.'s buildings and machinery in De Soto county, Fla., are being removed to Bone Valley. It is reported that the contract for taking down the dry-bin and erecting it at the works of the Bone Valley Phosphate Co., near Bartow, is for \$1000. Captain Bennett, of Kentucky, is superintending the removal of machinery, etc.

THE domestic shipments of phosphate rock through Charleston, S. C., for the week ending the 26th ult. were as follows: Schooners T. W. Dunn with 950 tons for Elizabethport, N. J.; Addie B. Bacon for Cooper's Creek, N. J., with 520 tons, and the Maggie J. Lawrence for Baltimore with 550 tons. The total shipments since September 1, 1894, amount to 90,417 tons of crude and 1450 tons of ground rock, against 100,119 tons of crude and 4837 tons of ground in 1893-94.

THE Knoxville Iron Co. has elected Mr. W. P. Chamberlain, president; I. J. Stephenson, vice-president, and Otis A. Brown, secretary and treasurer.

Pensacola.

[From our own Correspondent.]

PENSACOLA, FLA., July 30.

The movement in lumber and timber continues of an average volume, and for the month just closing business has been more satisfactory in some respects. It is, however, to be noted that prices continue about the same, and for timber the market is fairly steady, with very little prompt demand. Advices from Europe continue unsatisfactory, and the markets are all overstocked, yet, while these conditions prevail, shipments are still going on. The mills adjacent to this city are all operating to their full capacity, and have orders sufficient to keep them fully employed. During the past week there has been a better demand from domestic points, and several charters have been made for early August shipment to New York. Among the clearances for the week the following vessels were reported: Bark Sola for Vejle, Denmark, with 200,000 feet of lumber, 43,000 feet of sawn timber and 2832 cubic feet of hewn; steamship Daniel for London with 13,000 feet of lumber and 1384,000 feet of sawn timber; steamship Arus for St. Nazaire, France, with 600,000 feet of lumber, 398,000 feet of sawn timber and 4583 cubic feet of hewn timber; steamship Knutsford for Greenock with 185,000 feet of lumber and 1,217,000 feet of sawn timber; brig Diadema for Scio, Greece, with 26,000 feet of lumber and 326,000 feet of sawn timber; bark Vidette for Boston with 449,000 feet of lumber; steamship Cayo Romano for Rotterdam with 1,640,000 feet of lumber and 85,000 feet of sawn timber. The schooner Samuel Egerton cleared for Galveston with 100,000 shingles, and the schooner Mary Sprague for Boston with 475,000 feet of lumber. The charters reported on the New York market this week were as follows: An Italian bark, 981 tons, Pensacola to the Mediterranean with sawn timber, 95/; a British bark, 1088 tons, Pensacola to Buenos Ayres, \$12, \$2 form; a bark, 663 tons, Pensacola to Buenos Ayres, \$12.50, \$2 form, and a schooner, 468 tons, Pensacola to Lynnat \$6.75.

Mobile.

[From our own Correspondent.]

MOBILE, ALA., July 29.

Business in nearly every department of the lumber and timber industry continues quiet. The movement, however, is of better volume, and some large orders have been filled during the past week. The timber trade continues dull, with hewn timber quoted at 10 to 11 cents and sawn at 9 cents per cubic foot. The shipments of lumber during the week amounted to 961,831 feet, and since September 1, 1894, the total amount is 52,917,700 feet, against 64,079,502 feet last year. The clearances reported during the week were as follows: Steamer Verax for London, England, with 660,299 feet of lumber, 36,421 cubic feet of hewn timber and 30,125 cubic feet of sawn timber. The steamer Dalmally cleared for Liverpool with 296,532 feet of lumber and 32,736 cubic feet of sawn timber, and steamer Fulton for Boca del Tora with 5000 feet of lumber. The British steamship Strathgyle was cleared from Scranton, Miss., by Messrs. Hunter, Benn & Co., of this city, on the 24th inst. for Rotterdam. Her cargo consisted of 3,293,070 superficial feet of lumber in the shape of deals. This cargo is said to be one of the largest that ever left a United States port. The steamer Isle of Kent is now loading lumber at the Sullivan Lumber Co.'s wharf for South America. She will in all probability take out the largest cargo that ever left this port. The freight market shows no material change and rates on lumber are nominally steady at \$5.50 to \$6 in gold for the West Indies; coastwise, \$5.50 to \$6; River Platte, \$10 to \$11 American gold, and Mexico, \$7 to \$7.50. The New York charters reported are as follows:

A Norwegian bark, Mobile to Buenos Ayres, \$13; Rosario, \$14, \$2 form; a British bark, 1088 tons, Pensacola to Buenos Ayres, \$12, \$2 form, and an Italian bark, 941 tons, Mobile to Buenos Ayres, \$12, \$2 form.

Beaumont.

[From our own Correspondent.]

BEAUMONT, TEXAS, July 29.

Manufacturers and dealers in lumber in this section are very much gratified at the course the market is taking this season. There is a daily increase in the demand for lumber and orders are more plentiful. Prices for all desirable grades and dimensions continue firm, and sellers generally confine themselves to list figures. Stocks throughout this section are not excessive, and should a heavy demand prevail from dealers it would be difficult to execute the order promptly. The Journal in its review of the market says: "A large number of orders is expected to materialize during August, and at mills where there is a shortage of certain sizes and lengths the intervening time will be employed sorting up and making other preparations for large shipments. Prices are firm, few if any sales being made at list figures." There is also a good demand for shingles, but shipments continue light, as stocks are not well assorted. At the last meeting of the Texas and Louisiana shingle manufacturers the price was advanced five to ten cents. It is stated in lumber circles here that there will likely be considerable mill building this fall. The Texas Pine Land Association, of Boston, Mass., has decided to build a mill at Silsbee, which has been ordered through the Filer-Stowell Company. It will have a capacity of about 60,000 feet a day and be completed some time in October. Mr. T. J. Caraway will erect a mill at Ford's Bluff, and one will be erected at Orange to be owned by Mr. L. Miller, a large shingle manufacturer, and Mr. C. L. Goodman. It is stated that Mr. George Smyth, president of the Sabine Tram Co. of this city, contemplates erecting a mill at some desirable point, but has not as yet decided upon the location. The wet weather at Orange has restricted operations among saw-mill men, and the weather is still very unsettled. The demand for lumber is good, and mills are generally working up to their full capacity in order to fill orders. The railroad commission has granted authority for the adoption of a rate of five cents per 100 pounds on lumber, lath and shingles in carload lots between Houston and all stations on the Galveston, La Porte & Houston Railroad.

St. Louis.

[From our own Correspondent.]

ST. LOUIS, MO., July 29.

During the week under review transactions in the lumber market have been of better volume than usual at this period of the season, and just at present it looks as if the fall trade would open earlier than expected. Commission men are generally of the opinion that the general improvement in the iron market and other industries has had a favorable effect upon the lumber trade. The bountiful crops that are already assured is also a strong factor in creating a demand, which during the past week has been so active. The greatest improvement seems to be in yellow pine, while in white pine and hardwoods there has been a fair business doing. Some of the leading mills represented here sold as high as eighty cars of lumber during the week, the orders coming from all sections of the country. It is thought that mills generally will be very much pressed to fill the orders that may come to hand. The late rains restricted operations in the saw-mill section, and stocks are consequently light. As to prices, they may be written firm, with a hardening tendency, and the advance which went into effect on the 20th inst. has been generally adhered to. It is

now stated that a further advance will take place about September 1, which it is expected will be general all along the line of yellow-pine stocks. There has been a good trade doing in white pine, and stocks generally in country yards are light. It is thought that revision of prices will be made about August 1.

Lumber Notes.

THE Bridges & McKeithan Lumber Co., of Sumter, S. C., has been organized with a capital stock of \$5000.

THE saw and planing mill owned by J. S. Nagle, near Burnsville, Miss., was destroyed by fire on the 23d inst. The loss is estimated at \$3000, with no insurance.

THE log-pulling machines at Welaka, Fla., have closed down for a few weeks. Mr. John Dallow has purchased a machine, and will begin pulling logs in September.

THE Oak Lumber Co., of Ball Play, Ala., reports the lumber business as quite active. Its orders have been accumulating and its mills running at full capacity in order to fill them promptly.

THE Missouri Wood Finishing Co. was incorporated in St. Louis last week with a capital stock of \$10,000. The incorporators are Henry Binkmeyer, Charles V. Van and Thomas Matthison.

THE Gainesville Woodenware Factory at Gainesville, Fla., will commence operations in a few days. The company has adopted the most modern machinery, and will manufacture a variety of articles such as axe and hammer handles, etc.

IT is stated that an option has been given on the Manchester Cotton Mills property, several miles from Fort Worth, Texas, to Michigan capitalists. If the sale of the property is made, it is the intention of the purchasers to put in a big plant for the manufacture of school and church furniture.

THE Bodsman Lumber Co., of Memphis, Tenn., filed its charter last week. Messrs. J. F. Bodsman, Ross Gamble, A. T. Gamble, John H. Watkins and Pitkin C. Wright are the incorporators. The company proposes to do a general lumber business and deal in general merchandise and farm products.

MESSRS. SLADE BROS., of Conway, Ark., purchased about 300,000 feet of lumber from the estate of the late J. W. Robins, a prominent millman of that place. Slade Bros. operate a planing mill and sash and door factory at Conway. They purchased the Robins Lumber Co.'s plant about six months ago.

THE Jasper Brick & Lumber Co., Jasper, Ala., has taken into the firm Messrs. D. K. Cartter and J. B. Shields, both experts in the business. The company will put in a set of sash, door and blind machinery and the plant will be otherwise enlarged. A large building is being erected at the mill and other improvements are being made.

MR. T. B. PIERCE, manager of the Warsaw Crate Factory, at Warsaw, N. C., reports a large volume of business so far this season. The factory has supplied the local trade with 14,000 berry crates alone, while 112 solid car lots have been shipped to other points. Many bean, pea and grape baskets have also been shipped. Machinery will soon be added for making egg crates.

AMONG the clearances of lumber through Jacksonville, Fla., during the past week were the following vessels: Steamer Algonquin for New York with 400,000 feet of lumber and 4000 crossies, with other merchandise; the schooner Tillie Vanderherchen for Portland, Me., with 315,800 feet, and the schooner Three Sisters for Philadelphia with 253,000 feet of yellow-pine lumber.

ACTING MAYOR SCREVEN, of Savannah, Ga., received a letter last week from the New York Wood Vulcanizing Co. stating that the

company was considering the question of removing its plant to some lumber location in the South where inducements would be offered to such an enterprise, and requested to be referred to parties with whom they might correspond on the subject. The letter was referred to the industrial committee.

AMONG the clearances from Brunswick, Ga., during the past week the following vessels are reported: Schooners Viking with 19,050 crossies and Laura C. Anderson with 15,530 for New York; schooner Mary B. Judge with 364,000 feet of lumber for Philadelphia; bark Stephen G. Hart with 42,000 feet of lumber for Providence, R. I.; schooner Viola Reppard with 379,000 feet of lumber for Boston, and bark Herbert Fuller with 570,000 feet of lumber for Noank.

THE lumber business at Sutton, W. Va., and adjacent points is reported fairly active. The Braxton Lumber Co., composed of Pennsylvania capitalists, has over 5000 acres leased, and has commenced operating two large saw mills near that place. The Pardee Lumber Co. has over 3,000,000 feet of poplar in the boom, and is running the band mill to its full capacity. There are at least twenty small saw mills in Braxton county, which are all in full operation. The industrial outlook was never brighter.

THE Gardner & Lacy Lumber Co., whose extensive saw mills are situated on the peninsula opposite Georgetown, S. C., is increasing its storage-yards, having recently purchased from Mr. L. S. Ehrich several hundred feet of water-front to the west of its site. It is reported that the company will soon erect upon this property a large planing mill. Three large vessels are loading lumber and shingles at the company's wharves—one for New York city, one for Irvington-on-the-Hudson and one for Bridgeport and New Haven, Conn.

AN important meeting of the directory of the Mobile Chamber of Commerce was held on Saturday last. President A. C. Danner stated that the meeting had been called to take action on the subject of improving the timber-inspection service of Mobile. Secretary St. John read a communication from the leading timber shippers in which they stated that if the Chamber would adopt rules and classifications regulating the inspection of timber in this market, they would support the same and only purchase from inspectors holding license from the Chamber of Commerce. Mr. A. S. Benn, chairman of a committee on timber, lumber, staves and shingles, presented a set of rules and classifications for the consideration and action of the Exchange. The changes were few in the classification of lumber and timber, but the classification of hardwood was new. The report was adopted, and the directory authorized the committee to report a classification for cypress lumber and for staves.

A NEW YORK dispatch claims that a syndicate composed of Theodore A. Havemeyer, C. P. Huntington, George M. Pullman and others has secured a controlling interest in the Chamberlain Hotel at Old Point Comfort, and will complete it this year. This hotel was begun several years ago with the intention to make it one of the largest and finest resorts in the country. It is understood that over \$1,000,000 have been spent upon it.

THE Beehive Coke Oven By-Products Co. has been incorporated at Trenton, N. J., with a capital stock of \$500,000, with permission to increase to \$5,000,000. The incorporators are Warren Delano, Jr., vice-president of Lackawanna Steel & Iron Co., 52 Wall street, New York, and James B. Dill and Robert A. Cook. It is reported that this company contemplates some combination of coke companies, or the establishment of coke companies to utilize the by-products of coke.

FINANCIAL NEWS.

New Corporations.

The Citizens' Bank of Sikeston, Mo., has been organized with \$30,000 capital by S. B. Hunter and others.

The Morgan Loan Co. has been formed at St. Louis, Mo., by A. D. Anderson and others with \$8000 capital.

T. T. and M. B. Lay, of Springfield, Mo., are organizing a bank at Willow Springs, Mo., with \$5000 capital.

A commission has been issued to the Mutual Building and Loan Association, of Orangeburg, S. C., the incorporators being George W. Brunson, Dr. J. G. Wannamaker, D. O. Herbert, W. S. Stewart, J. E. Glover, Wm. L. Glaze, J. S. Albergotti, S. G. Parler, John Cart, J. M. Oliver, John W. Fairley and Anton Berg. The capital stock is to be \$150,000, divided into 1500 shares, payable in monthly instalments of \$1 each.

New Securities.

The Auburn Wagon Co., of Hagerstown, Md., has decided to issue \$50,000 in 8 per cent. preferred stock.

The city of Jacksonville, Fla., has sold \$400,000 worth of the recent issue of 5 per cent. bonds to refund its indebtedness. The last sale retires the entire issue of 8 per cent. bonds outstanding against the city.

The city of Baltimore has sold \$720,000 of 3½ per cent. stock to the Fidelity Trust & Deposit Co. of the city for 106.68. This is claimed to be the highest price ever paid in this country for city securities bearing 3½ per cent. interest.

The town of Culpeper, Va., will receive bids until August 15 for the purchase of \$20,000 in the registered bonds of that corporation bearing interest at 6 per cent., payable semi-annually, and running twenty years, with the option of redeeming at any time after five years.

Interest and Dividends.

The Barnesville (Ga.) Manufacturing Co. has declared a semi-annual dividend of 2 per cent.

Financial Notes.

MR. E. P. MILLER has been elected cashier of the First National Bank of Lynchburg, Va., succeeding Mr. A. W. Talley.

MR. R. M. NELSON has been elected president, and Mr. A. T. Jones, vice-president, of the Alabama National Bank at Birmingham.

Iron Markets.

CINCINNATI, July 27.

A steady expansion of the iron market in all directions is the significant feature. The expansion applies to production as well as to consumption. This leads to a cautionary feeling among buyers, many of whom think the thing will be overdone and that prices will ease up before very long. A careful review of the field would indicate that the increase of production of pig is hardly keeping pace with the increase in finished products. We have recently pointed out that the prospective increase of active furnace capacity between now and January 1 can hardly exceed 4000 tons a day, or say 1,250,000 tons a year. Experienced makers of iron believe that even such an expansion of output will be quickly absorbed by the growing demands of consumers. On this head there is a difference of opinion, but all recognize that the outcome depends upon the crops, railroad buying and the absence of unsettled features in finances.

So far as new business is concerned the market was unquestionably quiet the past week all over the country. The furnaces seem to be glad to see this, for it gives them an opportunity to catch up on old business, some of which is pressing.

Nearly all of the furnaces still have uncomfortably-filled order books, and are wanting to see their future engagements run down somewhat before making large new contracts.

The business that has been done has mainly been in the West, the Eastern markets and Central West remaining very quiet.

Prices are firmly maintained all along the line. There have been no further advances reported except in Lake Superior charcoal iron, which has lagged sadly behind the procession. Hinkle, the largest producer, advanced price at the close of the week from \$13.50 to \$14 cash at lake ports. Other brands have sold at \$12.50 to \$13.

Stocks of charcoal iron are being reduced very considerably, and if the railroads place heavy orders for cars this fall, there will be a flurry in this class of pig iron.

Money is working closer, owing to the increased demands of business; collections, however, are remarkably good, and the tone of business throughout is healthy.

We make no change in quotations, which are for cash f. o. b. Cincinnati:

Southern coke No. 1 foundry.....	\$12 00@	\$12 50
South. coke No. 2 foundry and No. 1 soft	11 50@	12 25
Lake Superior coke No. 1.....	12 50@	13 50
Lake Superior coke No. 2.....	12 00@	13 00
Hanging Rock charcoal No. 1.....	15 50@	17 00
Tennessee charcoal No. 1.....	13 50@	14 50
Jackson county silvery No. 1.....	14 00@	15 00
Southern coke, gray forge.....	11 00@	11 00
Southern coke, mottled.....	10 75@	11 00
Standard Alabama car-wheel.....	15 00@	16 00
Tennessee car-wheel.....	14 50@	15 00
Lake Sup'r car-wheel and malleable.	14 25@	14 75

ST. LOUIS, July 27.

The month of July has shown but little change in the iron market. Southern irons remain very firm. Eastern furnaces have in the past ten days advanced prices proportionately to the advance of other irons.

The heavy decrease in stocks of the larger Southern iron furnaces, notwithstanding the increased output of the entire Southern iron district, is convincing evidence that consumption is by no means stationary.

Naturally, heavy subjects are avoided in hot weather, and but few large orders for pig iron have been placed this week. This comes as a relief to the furnaces, as many of them are overcrowded with orders and behind on shipments.

We quote for cash f. o. b. St. Louis:

Southern coke No. 1.....	\$12 50@	\$12 75
Southern coke No. 2.....	12 00@	12 25
Southern coke No. 3.....	11 75@	12 00
Southern gray forge.....	11 75@	12 00
Southern charcoal No. 1.....	14 50@	15 00
Ohio softeners.....	14 00@	14 50
Lake Superior car-wheel.....	14 50@	15 00
Southern car-wheel.....	16 00@	16 50
Genuine Connellsville coke.....	4 75	
West Virginia coke.....	4 75	

CHICAGO, July 27.

This has been another week of good business. Orders are coming in freely and easily and not a single weak point in the market is visible. Several large contracts were placed for Southern iron and a few of moderate size for Lake Superior charcoal iron. Inquiries for round lots continue and considerable heavy buying is in sight. Reports received from several large implement manufacturers show that the crops are satisfactory, and the railroad companies are making preparations to move them, and are buying car-wheel and foundry irons to supply additional equipment.

We quote for cash f. o. b. Chicago:

Southern coke No. 1 soft & No. 2 dry.....	\$12 50@	\$12 75
Southern coke No. 2 soft & No. 3 dry.....	12 25@	12 75
Ohio Scotch softeners No. 1.....	13 50@	14 00
Lake Superior charcoal Nos. 1 to 6.....	14 00@	14 50

BUFFALO, July 27.

The pig-iron market in this vicinity continues strong, and the constitutional bear that predicted a decided drop when we reached the usual dull vacation period has been disappointed. Large orders for pig iron have dropped off just as he said, but the small quick-shipment orders have helped to offset so far at least the expected slump. Large sales are scarce, as much from the fact that furnaces have nothing to offer as from consumers being well supplied.

The New York Central Railroad placed

orders this week for 1000 cars, but divided the order among four shops, so that it was hardly felt. This, however, is an encouraging sign to those on the inside. More are to follow, it is said, as soon as the orders can be placed quietly.

Consumption increases daily. We have four large soil-pipe manufacturers in this territory and they are crowded with orders, each one building a much needed addition to the foundry to take care of the increased demand caused by the unusual amount of building.

The only advance in the prices of pig iron noticed in this district is in certain scarce grades of Lake Superior charcoal. All Lake Superior charcoal iron, however, is firmer.

The week closes with furnaces busy and hurrying shipments that have been delayed. Foundries that have covered for their supplies are thankful to get the iron, and those buying now are paying more attention to getting their orders placed where they will be sure of securing the metal when wanted than to beating down the price a few cents.

We quote for cash f. o. b. cars Buffalo:

No. 1 foundry strong coke iron Lake Superior ore.....	\$13 75@	\$13 75
No. 2 foundry strong coke iron Lake Superior ore.....	13 25@	13 25
Ohio strong softener No. 1.....	14 25@	14 25
Ohio strong softener No. 2.....	13 75@	13 75
Jackson county silvery No. 1.....	15 75@	15 75
Lake Superior charcoal.....	13 50@	13 50
Southern soft No. 1.....	13 50@	13 50
Southern soft No. 2.....	13 00@	13 00
Hanging Rock charcoal.....	18 50@	18 50

BOSTON, July 27.

It is rather encouraging to see the amount of business being done by the iron foundries for this time of the year, and while they are purchasing pig iron very sparingly, their stock must be rapidly diminishing, and it will not be many weeks before they will be obliged to replenish their supply.

Among the iron dealers business is rather quiet. The recent sharp advance in values caused a heavy buying movement, and such consumers as have not placed their orders are holding off in hopes that prices may drop before the fall trade sets in. A reaction, however, seems impossible at this time, as most of the furnaces throughout the country are well sold ahead and are not over-anxious for new business even at ruling values, believing that before the snow flies prices will be higher than they are today, and consequently wish to be in a position to reap the benefits.

The market holds very firm, and lately the charcoal furnaces have followed the example set by their neighbors and have marked up their prices about \$1 per ton.

We quote for cash delivered Boston:

Alabama No. 1 foundry.....	\$14 00@	\$14 25
Alabama No. 2 foundry and No. 1 soft.....	13 50@	13 75
Alabama No. 3 foundry and No. 2 soft.....	13 25@	13 50
Alabama No. C. C. car-wheel.....	18 00@	18 50
Strong L. S. coke iron No. 1 foundry.....	15 50@	15 75
Lake Superior charcoal car-wheel.....	16 50@	17 00
American-Scotch (Northern) No. 1.....	15 50@	15 75
Jackson county silvery No. 1.....	17 00@	17 50

NEW YORK, July 27.

The foundrymen are busier than they have been for several years, and are calling for iron faster than deliveries originally specified in their contracts. After the extreme hot weather is over we look for a fairly active market, notwithstanding that most buyers think they have covered their wants for the rest of the year.

We quote for cash f. o. b. New York:

No. 1 standard Southern.....	\$13 75@	\$14 00
No. 2 standard Southern.....	13 00@	13 25
No. 1 standard soft.....	13 00@	13 25
No. 1 foundry lake ore coke iron.....	14 75@	15 25
No. 2 foundry lake ore coke iron.....	14 25@	14 75
Lake Superior C. C.	15 25@	15 50

PHILADELPHIA, July 27.

The iron market is passive. Buyers are pretty well covered for their nearby wants, and many enquiries received this week have come from buyers located temporarily within sight of the mighty deep. The enquiries referred to are simply feelers and point to business in the fall. Furnaces are pounding away filling orders, and as a rule are not seeking new business.

We quote for cash f. o. b. Philadelphia:

Standard Alabama No. 1 X.....	\$13 75@	\$14 00
Standard Alabama No. 2 X.....	13 00@	13 25

Standard Southern No. 1 soft.....	13 00@	13 25
Lake ore No. 1 X.....	14 75@	15 25
Lake ore No. 2 X.....	14 25@	14 75
Lake Superior charcoal.....	15 25@	15 50

ROGERS, BROWN & Co.

An Attractive Summer Resort.

WARM SPRINGS, GA., July 27.

Editor Manufacturers' Record:

From these famous old Springs as central headquarters I propose to tell your readers about this wonderful fruit section of Georgia, which is rapidly becoming the fruit Eldorado of this continent. These Springs are the Warm Springs of Merriwether county, and are nearly midway between Columbus and Griffin, on the Georgia, Midland & Gulf Railroad, forty-two miles from Columbus, and are probably the best among all the fine summer resorts that Georgia has. The hotel and the many cottages are filled with the best people of the State, including Gov. W. Y. Atkinson, Col. G. Gunby Jordan, railroad commissioner; ex-Congressman N. J. Hammond, ex-Attorney-General W. A. Little, Joel Chandler Harris, the famous "Uncle Remus," Editor F. H. Richardson, of the Atlanta Journal, and other leaders.

The Springs are located on a ridge 1200 feet above the level of the sea, where the air is deliciously cool. The bathing is hardly surpassed anywhere in the United States. There is a great square pool large enough for 100 or 200 people, and, lit up at night, it makes a delightful place of recreation. Then there are large pools for each sex and numbers of single bathing places. The water has a temperature of 90°, and is naturally medicated. The resort is one of the most attractive in the South and equal in many respects to any in the United States. It is situated in this marvellous fruit region, conveniently accessible from such cities as Atlanta, Columbus, Macon and their rail connections.

I. W. AVERY.

TRADE LITERATURE.

SEVERAL publications issued by the Rand Drill Co., 23 Park Place, New York city, describe recent and special types of machines made by this concern. These pamphlets cover belt-driven air compressors, bar channeling machines, water-power air compressors, compound Corliss and Meyer-valve air compressors, and high pressure air compressors. A pamphlet also published by the company reviews recent air and gas compressors. The wonderful possibilities now generally recognized of compressed air makes literature on this subject of value to the practical man, and a study of the pamphlets mentioned will likely add to the knowledge as well as suggest some valuable methods to the proprietors of industrial establishments.

An illustrated catalogue from the Huyett & Smith Manufacturing Co., of Detroit, Mich., is chiefly devoted to fans, dust collectors, hot blast apparatus and dry-kiln equipment. Fans are described that are light and durable in proportion to their efficiency and with evenly-distributed strength, consuming little power in operation and moving large volumes of air at low speed, noiseless and effective in any position. A compact and substantial combination of a disc fan and direct-attached high speed engine is shown. This arrangement is extensively used for both ventilating and drying purposes. Where economy of space is essential a combination of the Smith ventilating fan with the Dake double reciprocating engine gives efficient service. The superior points of the Smith pressure blowers are explained. An adaptation of these blowers is made for use in connection with forge fires and cupola works, and also for blowing furnaces of all kinds, steam boilers, heating puddling, nail furnaces, etc. They are constructed for delivering a large volume of air under any ordinary pressure with the least possible amount of power applied. Several styles of steel-plate steam fans are shown. The Smith high-speed vertical engines, especially designed from expert knowledge of the requirements for fan propulsion, and the horizontal engines for blower work will interest users of such equipment. A low-pressure engine is also a feature of the catalogue. Much attention has been devoted by this company to the question of properly drying lumber, and it has achieved a notable success with the equipment it furnishes for this purpose. Several chapters in the catalogue touch on a timely subject, viz: the heating and ventilating of public schools and buildings, manufacturing establishments, etc.

CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under the head of "Machinery Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ALABAMA.

Anniston—Iron Furnace.—It is reported that preparations are to be made at once to put the Woodstock Iron Co.'s No. 4 furnace in blast. A new engine will be put in. Address J. W. McCulloh.

Birmingham—Compress.—E. and C. E. Thomes, of Mobile, it is stated, have leased a warehouse, and will put in a cotton compress.

Horse Creek—Coke Ovens.—The Ivy Leaf Coal & Coke Co. is about to add fifty coke ovens to its plant.

Huntsville—Cotton Warehouse.—It is reported that a company has been formed to erect another cotton warehouse. Address secretary Chamber of Commerce.

Jasper—Woodworking.—It is stated that the Jasper Brick & Lumber Co. will add a factory for making doors, sashes, etc., to its plant.

Leeds—Iron Mines.—The Sloss Iron & Steel Co. is reported to be preparing to open iron-ore beds near Leeds. J. W. Castleman is in charge.

Sulligent—Telephone.—A company is being formed to build a telephone line between Sulligent and Vernon.

Uniontown—Rope Factory.—It is reported that B. F. Howard is purchasing equipment for his rope factory and will add thread machines to it. He will double the capacity of the plant.

Uniontown—Electric Lights.—A company is being organized to secure an electric-light plant.

ARKANSAS.

Hot Springs—Power Company.—Dr. J. J. Walker and Robert Murray are stated to be interested in the company to develop water-power from the Ouachita river. A dam 406 feet long and fifteen feet high is proposed to operate a set of water-wheels for generating electric-power.

Little Rock—Gold-mining.—The Pearl Building & Mining Co. has been formed to work a gold-bearing vein claimed to exist near the city. B. S. Thalheimer is president, and R. C. Hampton, manager.

Little Rock—Cottonseed Company.—J. E. England, S. S. Wassell and others have formed the Standard Cottonseed Co. with \$100,000 capital.

Poplar Grove—Novelty Works.—Arrangements are being made to start a novelty works. S. H. Patch will be manager.

FLORIDA.

Anthony—Pottery Works.—H. B. Grocott & Son, of Wheeling, W. Va., it is reported, will establish a pottery works.

Gainesville—Packing Plant.—The Alachua Canning Co. will operate the fruit and vegetable packing plant to be started; no machinery purchased yet.

High Springs—Furniture Factory.—Vincent, Futch & Co., it is reported, will enlarge their furniture factory and purchase more machinery for working pine lumber.

Jacksonville—Telephone Company.—W. N. Shine, of Tallahassee, and A. H. King, of Jacksonville,

are directors in the Jacksonville Telephone Co., which proposes to establish an exchange.*

Jacksonville—Machine Shops.—The Plant Railway & Steamship Co. is about to select a site for machine shops at some point on its line. Address H. B. Plant, 12 West 23d street, New York.

Ocala—Cigar Factory.—Jose Guiteriez will start a cigar factory.

Orlando—Drainage.—Bids are about to be solicited for sixty-four miles of canals for drainage purposes. Companies wishing to bid should address W. W. Russell, Box 299; or A. O. Russell, care of United States Printing Co., Cincinnati, Ohio.

St. Augustine—Electric-lighting.—It is stated that T. J. Appleyard, of Sanford, Fla., and E. M. Hammond, of Orlando, are interested in a company to place an electric light system in the city.

Tampa—Bakery.—C. Averill has purchased ground on which to erect a cracker bakery.

Tampa—Gas Works.—A. J. Boardman, Peter O. Knight and associates have formed the Tampa Gas Co. to build a plant for supplying gas.

GEORGIA.

Athens—Electric Plant.—It is reported that the Electric Cotton Mill Co.'s proposed plant will be operated by electric motors.

Atlanta—Amusement Company.—The Phoenix Wheel Co. has been formed by Jacob Haas and others to erect a wheel at the exposition similar to the Ferris wheel. It will be operated by steam engines.

Atlanta—Machine Shops.—Bids have been solicited for constructing the Southern Railway Co.'s machine shops in Atlanta. They include one building 100x120 feet, besides several enlargements. C. H. Hudson is chief engineer.

Atlanta—Tobacco.—W. I. and George R. Webb and others have organized the Webb Brothers Co. for dealing in tobacco; capital \$20,000.

Augusta—Cotton Mill.—It is reported that the company which intends operating the Algernon Mill has applied for 750 horse-power from the city to operate it. Power is furnished by the Augusta Canal. Stewart Phinizy is among those interested.

Augusta—Shoe Factory.—It is announced that parties are considering the idea of starting a shoe factory, also tannery, on the old exposition site.

Heardmont—Cotton Mill.—It is reported that President Thomas M. Swift, of the Swift Manufacturing Co., of Elberton, has purchased a power-site at Heardmont, and will build a cotton mill.

High Shoals—Cotton Mills.—It is stated that machinery has been purchased to increase the capacity of the High Shoals Manufacturing Co.'s plant, of which J. W. Hinton is president.

Savannah—Wood-vulcanizing Works.—The Citizens' Industrial Committee is considering a proposition from the New York Wood Vulcanizing Co. to remove its plant to Savannah. J. L. Whately is chairman of the committee.

Toccoa—Cotton Mill.—W. A. Matheson, W. R. Bruce and others are organizing a company with \$100,000 capital to build a cotton mill. It is stated that over one-half of the stock has been taken. Address W. A. Matheson.

KENTUCKY.

Bardstown—Electric-lighting.—The corporation desires bids for installing an electric-light plant until August 10. Address Record Printing Co. for particulars.

Hopkinsville—Water Works.—S. R. Bullock, of New York, has secured contract to build a water-works system.

LOUISIANA.

New Orleans—Elevator.—The contract for building the grain elevator of the New Orleans & Western Railroad Co. has been let to James Stewart & Co., of St. Louis. Chief Engineer A. W. Swanitz states that contracts for cotton compresses have also been awarded.

New Orleans—Viaduct.—The Southern Pacific Railway Co. has planned an iron viaduct for pedestrians and wagons 1809 feet long, twenty-one feet high, with a carriageway twenty feet wide and a footway five feet wide. Address T. Kruttschnitt, manager.

New Orleans—Coffee Factory.—The Kern Coffee Manufacturing Co. will erect a \$7000 building on Fulton street.

New Orleans—Bridge.—C. R. Kennedy, city comptroller, will receive bids for building an iron bridge until August 9.

New Orleans—Box Factory.—The Phoenix Box Manufacturing Co. has been organized with \$10,000 capital by T. M. Wells, John Grassell and others.

New Orleans—Conduits.—The city of New Orleans is considering the idea of constructing an extensive underground conduit system for bury-

ing telephone, telegraph, electric light and other wires. If adopted, several miles of this work will be required. Mr. A. Perrillat, one of the State engineers, is in charge of the plan.

New Orleans—Warehouse.—Walter J. Smith and others have incorporated the Commercial Warehouse Co. with \$15,000 capital.

Sildell—Brick Works.—F. G. Schlieder has bought the Salmen Manufacturing Co.'s plant and, it is stated, will organize a company to operate it.

MARYLAND.

Ammdale—Electric-lighting.—An electric-light plant may be put in the school of the Christian Brothers.

Baltimore—Iron Works.—The Baltimore Malleable Iron & Steel Casting Co., it is reported, is arranging to increase its capacity for work by building a molding shop 50x210 feet and a converting shop 80x200 feet. Address P. Kennedy, president.

Baltimore—Bakery.—George Ruback, William Foster and others have formed the Baltimore Co-operative Baking Co. with \$5000 capital.

Clifford—Chemical Works.—It is reported that Frederick Vermeron and Joseph Vaurumbeke, of Aurora, Ill., have bought fifty-three acres of land and will build a chemical making plant.

Cumberland—Steel Works.—The plant of the Cumberland Steel and Iron Shafting Works has been placed in operation with 100 employees.

Frostburg—Coal-mining.—The Withers coal property has been purchased by Black, Sheridan & Wilson, of Baltimore, and others. It is reported that mines will be opened at once.

Frostburg—Coal Mine.—The New York Mining Co., it is reported, is about to resume work at its plant. John Sheridan is president.

Phoenix—Cotton-mill Addition.—The Phoenix Cotton Mill has been equipped with additional machinery.

MISSISSIPPI.

Jackson—Meat Packing.—It is reported that a company is being formed to build a plant for packing meat.

Stonewall Station—Cotton Mill.—The Stonewall Cotton Mills has commenced the erection of its addition; machinery not purchased.

MISSOURI.

Kansas City—Cottonseed Oil.—The Texas Cottonseed Oil & Meal Co. has been formed by J. T. Grider, M. G. Peters and others, with \$20,000 capital.

Springfield—Mining.—The Springfield Mining Co. with \$25,000 capital, has been formed by E. L. Link, J. W. Snyder and others.

St. Louis—Construction.—The La Salle Construction Co. has been formed by James Atkins, J. W. Hogg and others.

St. Louis—Tobacco Factory.—The Liggett & Myer Tobacco Co. has begun constructing its plant, which, it is reported, is to cost \$1,500,000.

NORTH CAROLINA.

Charlotte—Garbage Crematory.—The city is considering the building of a crematory for garbage. Address Mayor Weddington.

Charlotte—Cotton Mill.—The directors of the Highland Park Manufacturing Co. have determined to build the proposed additional mill, which is to have 500 spindles. W. E. Holt is president.

Concord—Cotton Mill.—It is reported that a company is being formed to build a \$100,000 cotton mill in addition to the projects already under way.

Greensboro—Cotton Mill.—The Proximity Manufacturing Co. has not purchased machinery as yet for its mill.

Hillsboro—Cotton Mill.—It is stated that the proposed cotton mill will cost \$100,000. James Webb, Jr., is interested.

Hillsboro—Cotton Mills.—The Eno Cotton Mills will be the name of the plant to be built in Hillsboro. It will have \$100,000 capital and is to be for spinning; no machinery purchased yet. A. J. Ruffin and James Webb, Jr., are stockholders.

Madison—Cotton Mill.—It is reported that the cotton mill to be built at the Mayo rapids will be 79x300 feet in size and contain 15,000 spindles, employing 800 hands. It will use water power. J. H. Fries, of Winston-Salem, is president of the company.

Salisbury—Cotton Mill.—The Kesler Manufacturing Co. will build the proposed cotton mill. N. B. McCanness, P. H. Thompson and D. R. Julian will secure plans for the structure.

Weldon—Distillery.—Thomas Harris, of Salisbury, N. C., may build a distillery.

SOUTH CAROLINA.

Charleston—Clothing.—The Druelle Clothing Co.

has been commissioned to do business with \$5000 capital.

Columbia—Stationery.—The J. W. Gibbs Stationery Co. has been formed by J. W. Gibbs and others.

Edgefield—Cotton Mill.—The project to build a cotton mill has resulted in the incorporation of the Edgefield Manufacturing Co. with \$100,000 capital, which may be increased to \$250,000. Messrs. D. A. Tompkins, of Charlotte, N. C., and B. M. Miller are incorporators.

Georgetown—Lumber Mill.—It is reported that the Gardner & Lacy Lumber Co. is about to erect another planing mill.

Newberry—Clothing.—J. A. Davenport has chartered the Newberry Clothing Co. with \$8000 capital.

Prosperity—Packing Plant.—G. C. Shiry is preparing to start a fruit and vegetable packing plant near the town.

Sumter—Lumber Company.—P. L. Bridgers, D. T. McKeithan and others have incorporated the Bridgers McKeithan Lumber Co. with \$5000 capital.

Winnabow—Mercantile.—The Desportes Commission Co., to do a general mercantile business, has been formed by J. A. Desportes and others with \$10,000 capital.

TENNESSEE.

Chattanooga—Compress.—Arrangements are being made, it is stated, to rebuild the compress burned some time ago. Address David Bukofzer.

Chattanooga—Electric Lights.—It is reported that C. C. Shelton & Co. will put an electric-light plant in their flour mill.

Knoxville—Car-coupler Plant.—An effort is being made to organize a company to make the car-couplers patented by H. Raymond. Berwanger Bros. are reported as interested.

McMinnville—Water Works.—T. F. Stratton is general manager of a company which will place a water-works system in the town.*

TEXAS.

Aransas Pass—Harbor Improvement.—The Aransas Pass Harbor, Dock & Wharf Co. has been formed by J. B. Dibrell, Emil Mosheim and others with \$250,000 capital to excavate ship channels.

Beaumont—Saw Mill.—The Long Manufacturing Co. is building a saw mill.

Beaumont—Saw Mill.—George Symth is about to start a saw mill at some point near Beaumont.

Biddleville—Woodworking.—F. Wadsworth & Son will operate a handle and chair factory.

Dallas—Furniture Factory.—E. S. Moore, Kokomo, Ind., writes to the Commercial Club that he may establish a furniture factory to employ seventy-five hands in Dallas.

Elmendorf—Sewer pipe Works.—The San Antonio Sewer Pipe Co. has increased its capital from \$100,000 to \$200,000. It has 684 acres of land, and will erect two buildings each 105x120 feet. Power will be furnished by a 150 horse-power engine.

Fort Worth—Furniture.—It is reported that Michigan parties may take the Manchester Cotton Mills near the city and use them for a furniture factory.

Gonzales—Telephone System.—The Gonzales Telephone Co. has been organized to establish a long distance system by L. P. David, A. J. Moore and others.

Marble Falls—Cotton Mill.—It is reported that arrangements have been completed to build the proposed cotton mill.

Mooreville—Gin.—A. W. Eddins and others have formed the Mooreville Gin Co. with \$5000 capital.

Orange—Saw Mill.—L. Miller is about to erect a saw mill.

Rockport—Telephone System.—C. W. Booth and others have formed the Rockport Telephone Co. with \$10,000 capital.

Silsbee—Saw Mill.—The Texas Pine Land Association, it is stated, will erect a saw mill of 60,000 feet daily capacity.

Troy—Water Works.—The Artesian Water Co. has been chartered with \$10,000 capital by D. W. Glasson, C. L. Meyers and others.

VIRGINIA.

Alexandria—Bakery.—The George R. Hill Co. has let contract to Thomas Nelson for a bakery 90x100 feet to cost \$12,000.

Culpeper—Water Works.—An issue of \$20,000 in bonds will be made to build the proposed water works.

Norfolk—Lumber.—The Bodman Lumber Co. has been formed by J. F. Bodman, Ross Gamble and others.

Petersburg—Rope Factory.—C. T. Stickney will

organize a company to make grass and other rope.*

Pulaski—Furnace.—The Pulaski Iron Co.'s furnace has resumed operations.

Stanton—Car Works.—It is reported that the Bodley Wagon Co. may add a car-building plant to its enterprise.

Swansboro—Water Works.—A committee of citizens has been appointed to secure plans for a water supply. Address the town clerk.

WEST VIRGINIA.

Charleston—Coal Company.—The Kanawha Valley Coal Co. has been formed to place the product of several mining companies on the market.

Charleston—Power Plant.—It is reported that a New York syndicate is planning to utilize power from the Kanawha falls for electric light and power.

Fairmont—Oil Company.—The Lincoln Oil & Gas Co. has been formed by G. W. Carrol, E. F. Hartley and others to develop oil territory.

Fairmont—Glass Works.—The Fairmont Glass Co. may rebuild its plant. Address M. Humphries.

Wheeling—Polish-making.—The National Polish Co. has been chartered by George W. Johnson, A. W. Paul and others.

Wheeling—Saddlery.—The Wheeling Saddlery Co., to make harness, etc., has been formed with \$7600 capital by H. C. Robb, George Hatch and others.

BURNED.

Burnsville, Miss.—T. S. Nagle's saw mill.

Dunnsville, Va.—J. M. Owens's saw mill.

Greensboro, N. C.—Broaduax & Co.'s tobacco warehouse; loss \$10,000.

Nashville, Tenn.—The African Methodist Sunday-School Union building; loss \$20,000.

Paincourtville, La.—Emile Le Blanc's sugar-house; loss \$10,000.

West Point, Miss.—A. F. Shoffner & Son's lumber mill.

BUILDING NOTES.

Abbeville, Ala.—W. Chamberlin & Co., of Knoxville, Tenn., are preparing plans for two school-houses to cost \$25,000 each.

Alexandria, Va.—Church.—The Methodist congregation (South) has decided to build an \$18,000 edifice. Address George R. Hill.

Atlanta, Ga.—Auditorium.—An auditorium may be built to hold 4000 people. Address C. L. Montgomery, of building committee.

Atlanta, Ga.—Warehouse.—It is reported that a bonded warehouse will be built by the government. Grant Wilkins is architect.

Augusta, Ga.—Depot.—A project is under way to build a union railroad depot.

Augusta, Ga.—Dwellings.—Jacob Phinizy, it is stated, will erect six residences.

Augusta, Ga.—Residence.—W. C. Cleckley, it is reported, will erect an \$8000 residence.

Baltimore, Md.—Apartment-house.—Charles E. Cassell will prepare plans for a 10-story apartment-house thirty by about 125 feet for Joseph M. Cone, Law Building.

Baltimore, Md.—Church.—The Bohemian Mission is raising a fund to erect a church. Address Rev. Frank D. Chada, 1505 North Register street.

Baltimore, Md.—Church.—The German Baptists are considering the erection of a church. Address Dr. T. S. Geiser, 1031 West Baltimore street.

Baltimore, Md.—Dwellings.—Milton Goldman has purchased a tract of ground on North avenue for the erection of sixty-three brick dwellings.

Baltimore, Md.—Dwellings.—Joseph H. Pentz has received permission to erect eleven two-story dwellings.

Beaumont, Texas—Block.—Neal Starke, of Dallas, will erect a business block.

Charleston, W. Va.—Church.—The congregation of the Sacred Heart will build a \$30,000 edifice. Rev. Joseph Stenger is in charge.

Charlotte, N. C.—Depot.—The proposed Seaboard Air Line depot is to be of brick, two stories high and 40x120 feet. Address E. St. John, vice-president, Portsmouth, Va.

Charlotte, N. C.—Church.—The Methodist congregation has purchased a lot on which it proposes to erect a church edifice.

Cumberland Md.—Business Block.—It is reported that McMullen Bros., of Mount Savage, will erect a business block.

Daphne, Ala.—Church.—A site has been purchased for a Catholic church for Italians. Address Camillo Rossi.

Evergreen, Ala.—Hall.—C. B. Savage will erect a building for stores and a hall.

Evergreen, Ala.—Hotel.—C. P. Deming will build a hotel to cost \$10,000.

Fortress Monroe, Va.—Hotel.—It is reported that C. P. Huntington, Theodore Havemeyer and

others have formed a syndicate to complete and operate the Chamberlain Hotel.

Huntington, W. Va.—Courthouse.—The new courthouse will be of stone and three stories high, to cost \$100,000. Address the county court.

Knoxville, Tenn.—Hospital.—Baumann Bros., architects, have prepared plans for a hospital for insane patients, to be three stories high and accommodate eighty patients, to cost \$20,000.

Knoxville, Tenn.—Opera-house.—Baumann Bros., architects, are preparing plans for an opera house.

Knoxville, Tenn.—Opera-house.—The proposed opera-house will be 89x242 feet, three stories high and cost \$60,000. Bids will be wanted as soon as plans are prepared. Baumann Bros. are architects.

Macon, Ga.—Theatre.—The Ocmulgee Park Co. is considering the erection of a summer theatre with a small stage and scenery. Address the president.

Monroe, La.—Church.—The Methodists are raising funds to build a \$15,000 church. Address the pastor.

Nacogdoches, Texas—Hotel.—C. C. Chatham is about to begin work on a new hotel.

New Orleans, La.—Roundhouse.—The Illinois Central Railway Co., it is stated, has decided to build two locomotive roundhouses near the city. Address J. G. Mann, division engineer.

New Orleans, La.—Clubhouse.—Shepley, Rutan & Coolidge, of St. Louis, have prepared plans for the Pickwick clubhouse, which is to be three stories high and cost \$60,000.

Pensacola, Fla.—Synagogue.—Plans have been adopted for a brick synagogue. Address C. J. Heinberg.

Quitman, Ga.—School.—The board of trustees have decided to build a \$6000 academy.

Raleigh, N. C.—Clubhouse.—It is reported that the Capital Club will erect a clubhouse.

Richmond, Va.—Church.—The Broadus Memorial Baptist Church is raising funds to build an edifice. Address Rev. R. E. Chambers.

Rocky Mount, N. C.—Hotel.—R. H. Ricks is preparing to build a hotel.

Savannah, Ga.—Postoffice.—Bids will be received until August 23 by Supervising Architect Aiken at Washington for constructing the postoffice building. (See advertisement in this issue.)

St. Louis, Mo.—Manufacturing.—Gustav Schuchmann, a real estate owner, and others are considering the erection of a 10-story building for manufacturing purposes.

Sulligent, Ala.—Storehouse.—F. Ogden & Son will erect a brick storehouse.

Tampa, Fla.—Office Building.—The Tampa Board of Trade has decided to erect an office building six stories high with marble front to cost \$60,000. Address the secretary.

Washington, D. C.—Dwelling.—Mrs. J. J. McCleary has received permission to erect a \$11,000 residence.

Washington, D. C.—Schools.—Sites have been purchased for four schools to be erected by the District. Address the board of commissioners.

Washington, D. C.—Y. M. C. A. Building.—The Y. M. C. A., it is reported, will replace its burned building by a structure to cost \$150,000. Address the secretary, corner 14th and G streets.

RAILROAD CONSTRUCTION.

Railroads.

Baltimore, Md.—The Peninsular Construction Co., which proposes building a line from Queens-town, Md., to Lewes, Del., has elected Douglas H. Gordon, president; George B. Baker, vice-president, and E. Stabler, Jr., secretary. John S. Gibbs and Wesley M. Oler are on a committee to examine bids for building twenty-three miles of the road from Queenstown to Denton.

Bridgeport, W. Va.—The Koon's Run & Bridgeport Company has been incorporated with \$1,000,000 capital to build a line from Bridgeport into Marion county; office at Clarksburg. J. W. Wilkinson, of Bridgeport, and P. M. Long, of Clarksburg are among the incorporators.

Bryan, Texas.—Business men are forming a company to build a road from Bryan to Clay Station to connect with the Atchison, Topeka & Santa Fe system.

Calvert, Texas.—The proposed road to the coal mines will be six miles long, and may be built by the Houston & Texas Central Company. Dr. H. A. Lewis is the promoter.

Dahlgonega, Ga.—George J. Baldwin, one of the promoters of the line from Dahlgonega to Gainesville or Lula, writes the MANUFACTURERS' RECORD that bonds are now being sold to aid its construction, and that bids for building the road will probably be wanted about September 1. The distance is thirty miles and the estimated cost \$250,000.

Fredericksburg, Va.—Most of the five counties in the northern neck of the State have voted in favor of taking stock in the proposed Virginia, Fredericksburg & Western Railroad, in which Hon. Wm. H. Little, of Fredericksburg, and others are interested. Surveys have been made.

Henrietta, N. C.—Work has begun on the branch of the Seaboard Air Line from Ellenboro to Henrietta, about seven miles. The railway company is doing its own construction work.

Montgomery, Ala.—President S. D. Bloch, of the Montgomery, Hayneville & Camden road, informs the MANUFACTURERS' RECORD that the Mercantile Trust Co. of Baltimore will act as trustee for a bond issue of \$12,500 per mile to build the road, which is to be seventy five miles long.

Montgomery, Ala.—Chief Engineer Milner, of the Montgomery, Hayneville & Camden road, has begun surveys for the seventy-five miles of line to Camden. Sol D. Bloch is president.

Reidsville, Ga.—Contractor Hogan, of Augusta, has charge of building the road from Reidsville to Collins and has begun operations.

Southport, N. C.—E. B. Stevens, of the Southport & Western Company, informs the MANUFACTURERS' RECORD that the company has decided to build from Greenville, S. C., to Southport, with a branch to Wilmington. He states that Chicago capitalists have become interested and that surveys are to be made at once. The road will be about 240 miles long.

Springfield, Mo.—Surveys have begun on the proposed Springfield, Harrison & Little Rock Railroad, which is to run between the points mentioned. M. Daugherty is chief engineer.

Swansboro, N. C.—It is reported that the line recently surveyed is to extend from Swansboro, on the Atlantic coast, to Jacksonville, on the Wilmington, New Bern & Norfolk road, and is to be twenty miles long. The Parma-ee-Eccleston Lumber Co., of Jacksonville, is to construct it.

Tallassee, Ala.—Bids are wanted for constructing the Tallassee & Montgomery road, to extend from Tallassee to Goodwyn's Station on the Western Railway of Alabama. Address W. H. Micon, Tallassee Manufacturing Co.

Tempe, Texas.—The Atchison, Topeka & Santa Fe will construct five miles of sidings. B. F. Yoakum is vice-president.

Electric Railways.

Augusta, Ga.—The Augusta Railway Co. informs the MANUFACTURERS' RECORD that the extension of its trolley system to Lake Olmstead will be built at once by the company.

Baltimore, Md.—The Pikesville, Reisterstown & Emory Grove Electric Co. may build a branch about one mile long to Chantolane Springs. George R. Webb, Equitable Building, is a director.

Baltimore, Md.—A committee has been appointed to secure right of way for the proposed electric line to Wetheredville and Franklinton in the suburbs. T. H. Judik, president of the People's Bank, is interested.

Birmingham, Ala.—The question of extending the North Birmingham electric line into the suburbs is being considered.

Charleston, W. Va.—It is reported that a Northern syndicate may build an electric line from Kanawha Falls to Point Pleasant.

Hillsboro, Texas.—Secretary Ware, of the Hillsboro Street Railway Co., advises the MANUFACTURERS' RECORD that arrangements have been made to build it.

Lebanon, Mo.—It is stated that R. S. Scott and Hamilton White, of Des Moines, Iowa, will organize a company to build the proposed electric road from Lebanon to Bagnell. The distance is seventy-five miles.

Mexia, Texas.—Charles R. Pengulley is forming the company which proposes to build an electric road from Mexia to Tehuacana, six miles.

Moundsville, W. Va.—The electric line between Benwood and Moundsville, eight miles, has been completed. B. F. Peabody, of Benwood, is president of the company.

Norfolk, Va.—It is reported that the Norfolk, Albemarle & Atlantic Company is considering the idea of changing its road to standard gage and placing electric motors upon it. The line is about eighteen miles long, extending from Norfolk to Virginia Beach. B. P. Holland is superintendent.

Ocala, Fla.—It is reported that \$6000 worth of bonds to aid in building the Ocala & Silver Springs electric road have been taken and that work on it is about to begin. Address J. K. Martin.

Spartanburg, S. C.—Work has begun on the proposed electric line from Spartanburg to Glendale. George O. Tenney is the contractor.

St. Augustine, Fla.—The syndicate which proposes building an electric line in and near St. Augustine has secured a franchise from the city council. T. J. Appleyard and G. H. Packwood are interested.

Washington, D. C.—Arthur E. Randle and others have become interested in the Anacostia & Potomac Railway, and, it is stated, will extend it to Congress Heights and change the power to electric. The present road is about eight miles long. H. A. Griswold is president.

C. F. COLLINS, president of the Memphis Car & Foundry Co., has appointed as superintendent of that plant Samuel T. Rowley, who is now in charge.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Belting.—The Ohio Valley Manufacturing Co., Maysville, Ky., will buy 100 feet 14-inch and fifty feet 12-inch rubber belting.

Bolt Machine.—The Ohio Valley Manufacturing Co., Maysville, Ky., will buy an automatic bolt machine cutting threads and tapping nuts up to 3/4 inch, double or single head automatic dies.

Broom-making Apparatus.—S. H. Patch, Poplar Grove, Ark., wishes to buy a complete outfit for broom-making, including winders, presses, broom tools, etc., for factory of fifty dozen capacity.

Cans.—S. M. Carlton, Warsaw, N. C., wants to buy cans for peaches.

Cars.—It is reported that the Memphis & Charleston Railway Co. will purchase 200 box cars. R. B. Pegram, Jr., at Memphis, is superintendent.

Cotton Elevator.—W. W. Watkins, Aberdeen, Miss., will buy a cotton elevator.

Cotton Presses.—W. W. Watkins will buy a cotton press; postoffice, Aberdeen, Miss.

Dry-kiln.—The Ohio Valley Manufacturing Co., Maysville, Ky., will buy a dry-kiln outfit 17x50 feet, with eight 8 x foot trucks and two lifters.

Elevator.—The Ohio Valley Manufacturing Co., Maysville, Ky., is in the market for a freight elevator.

Engine and Boiler.—Party at 207 Courtland street, Baltimore, desires second-hand upright engine and boiler.

Fire Pump and Apparatus.—C. H. Dempwolf, York, Pa., is in the market for a 600-gallon underwriters' fire pump, also fire hydrants of two streams each and fire hose.

Gin.—W. W. Watkins, Aberdeen, Miss., will buy a 60-saw gin.

Grist Mill.—W. W. Watkins, Aberdeen, Miss., will buy a grist mill.

Hangers, etc.—The Ohio Valley Manufacturing Co., Maysville, Ky., wishes fifty post-hangers and couplings and six sets of collars.

Heating Apparatus.—The Pierpont Manufacturing Co., Crescent City, Fla., is in the market for heating apparatus for dry-kiln; second hand will do if in good condition.

Ice Machine.—C. F. Theobald, Biloxi, Miss., wishes estimates on one 10 to 15-ton ice machine.

Knife-grinder.—The Ohio Valley Manufacturing Co., Maysville, Ky., is in the market for one 30-inch knife-grinder.

Metal-working Machinery.—The Greenwood Shops, Greenwood, S. C., will purchase one 20x14-inch screw-cutting engine lathe, one 24 or 26-inch drill press, one 24x24x6 planer, chucks for lathe, planer and drill, and twenty feet 1 1/2-inch shafting, second hand.

Paper-cutter.—R. M. Reams, McMinnville, Tenn., wishes a second-hand 30 inch lever paper-cutter, in good condition.

Press.—Thos. K. Hudgens, Easley, S. C., is in the market for a cylinder press.

Printing Equipment.—Thos. K. Hudgens, Easley, S. C., will double the equipment of his printing office.

Pump.—B. Akerman, Cartersville, Ga., is in the market for a centrifugal pump, new or second-hand.

Saw Mill.—J. V. White, Poplar Grove, Ark., it is reported, will buy a complete saw-mill outfit.

Saw Wheels.—The Ohio Valley Manufacturing Co., Maysville, Ky., wants prices on 36 and 42-inch band-saw wheels.

Scales.—W. W. Watkins, Aberdeen, Miss., will buy a pair of standard scales.

School Furniture.—The commissioners of graded schools, Winston, N. C., wish to buy fifty single-seat desks suitable for pupils from fifteen to twenty years old; also one desk for teacher. Address, with cuts, full description and lowest prices delivered here, G. W. Hinshaw, secretary.

Shafting, Belting, etc.—W. W. Watkins, Aberdeen, Miss., will buy shafting and belting for cotton gin and mill.

Steam Pump.—Party at 207 Courtland street, Baltimore, desires a steam pump.

Surfacer.—The Sanford Sash & Blind Co., Sanford, N. C., will buy a 6x20 inch surfacer.

Tapping Machine.—Brock Bros., Anderson, S. C., will buy a second-hand Mueller tapping machine.

Telephone Equipment.—The Jacksonville Telephone Co., Jacksonville, Fla., wishes estimates for telephone equipment for 400 or more subscribers to an exchange. Address the company, or W. N. Shine, Tallahassee, Fla.

Tenon Machine.—The Sanford Sash & Blind Co., Sanford, N. C., will buy a tenon machine for sashes and blinds.

Threshing Machine.—J. P. Manney, Silver Springs, Miss., will buy a threshing machine and separator.

Water-works Plant.—T. F. Stratton, McMinnville, Tenn., wishes proposals for supplying a water works system, to include a 100,000 gallon standpipe, cast iron mains, hydrants, etc., complete; also pumping plant.

Charles S. Noble, Montclair, Fla., desires to correspond with firms making or selling windmills, water tanks, irrigation plants and gas engines.

C. L. Stickney, Petersburg, Va., wishes to correspond with makers of rope machinery. Address care George Mason.

H. M. Comer, manager Peace River Phosphate Co., Punta Gorda, Fla., desires to correspond with manufacturers of furnace material and fire-brick.

M. W. Knell 2219 Madison avenue, Baltimore, Md., desires to correspond with manufacturers of spring or other power motors (except water) which will produce half the power necessary to operate a sewing machine.

W. L. Napier, Greenville, Texas, desires to correspond with manufacturers of bed-ticking and excelsior.

The High Springs Oil Co., High Springs, Fla., desires to correspond with makers of machinery for tubs, buckets, etc.

TRADE NOTES.

THE new steamer "Bay State," of the Portland & Boston Line, presents a brilliant spectacle at night with its finely-designed electric-lighting arrangements. The Belknap Motor Co., of Portland, Me., manufacturer of the B. C. standard electric motors, installed the plant. The engines used are the "Ideal" Multipolar slow-speed dynamos of 400 lights capacity each are employed, but either machine will carry the entire load, amounting to 540 lights. The practice to use duplicate plants for marine work, so in case an accident should happen to either engine or dynamo the duplicate machine can do the work, is followed. W. H. Chapman, electrician for the company, designed the dynamos. The system of wiring is most excellent. There are eight main circuits controlled at the switchboard in dynamo-room which lead to sixteen different distributing boxes containing switches located in different parts of the boat, each switch controlling six lights, turning them on or off, as may be desired. These distributing boxes have glass fronts, secured with lock and key, and are under control of the steward of the boat. There are pilot lights on main and fore rigging, and at the bows of the boat. The fixtures are of the latest design, with opalescent globes and shades. The dining saloon is fitted with ground-glass globes, which give this part of the boat a very cheery and pleasing effect. The freight deck lights are protected with guarded fixtures. This equipment has attracted considerable attention, and as a result the Belknap Motor Co. has been called upon to install electric-lighting plants for the steamer "Portland," of the same line, and the steamship "St. Croix," of the International Steamship Co.

AN important legal decision that will interest users of advanced types of steam pumps was recently rendered by a Michigan court. The case was a suit for infringement by the Battle Creek Steam Pump Co., Battle Creek, Mich., against the Union Steam Pump Co., of the same city. The verdict of the court is very positive and far-reaching, and the claims of the Battle Creek Steam Pump Co. are approved. A decree was given by Judge Swan for the complainants enjoining the Union Steam Pump Co. from the manufacture, sale and use of the patented device in question. The defendant company makes the Frost steam pump and uses the Frost steam valve, which the court decided to be an infringement on the Marsh steam valve patent. In an extended and careful description of the workings of both the Marsh device and the Frost patent, which is claimed an infringement, Judge Swan, who rendered the opinion, says in part: "It seems evident, therefore, that the sum of the differences between the Marsh and Frost pumps is the form and locality of the restricted passage, which is indispensable to the successful operation of each. The apparent object of defendants is to avail themselves of that element of the Marsh pump by a variation of construction which shall preserve its benefits and yet disguise and conceal its action. They have placed the restricted passage in the stem of the valve, and have made the necessary structural changes in the steam passages and the cylinder connections to insure the same effect, 'circuitously,' which Marsh obtains

by a restricted passage leading 'directly' through the outer wall of the valve-head chamber into the steam port leading to the cylinder. This change of locality is formal only, and it is not sufficient to relieve the defendants from the charge of infringement. The huddling or accumulation of the steam on the inner face to overcome the cylinder steam pressure on the outer face is one of the ends sought and attained by the Marsh pump, and the same end is reached by practically the same means differently placed in the Frost pump, and the change is merely a colorable evasion of the Marsh patent."

TRADE LITERATURE.

THE Lodge & Davis Machine Tool Co., of Cincinnati, Ohio, U. S. A., has just issued a large handsome poster printed in four languages—English, French, Spanish and German—illustrating the various lines of engine lathes, milling machines, planers, drill presses, shapers, screw machines, etc., which it manufactures. This poster will be mailed to any address on application.

BOX NAILING machinery is rapidly advancing in utility, and the work possible with such machines is remarkable for accuracy and celerity. A leading manufacturer of this class of machinery is William S. Doig, 54 and 56 Franklin street, Brooklyn, N. Y. His product won a medal and a diploma at the World's Fair, and is rapidly winning the favor of users of machinery of its character. A catalogue just issued by Mr. Doig illustrates and describes his machinery and presents several lately perfected machines saving time, labor and cost.

A HAND-BOOK for the officials of street-car lines that presents much useful information has been issued by the Brownell Car Co., of St. Louis, Mo. Its title is the "Car-Buyer's Helper." It demonstrates how a good car differs from a poor one, and how to get it. The title explains the character of the book, which aims to give the reader a sufficient knowledge of electric and cable cars to enable him to negotiate for them advantageously. This is done in a plain-spoken way, and illustrations add to the clearness of the text. The book shows the weak points in car construction, going right into the methods employed and telling just how and what parts of a car conceal weaknesses. It shows where strength is essential and gives the reasons therefor. The book is comprehensive, and the data given will be found of value to those interested in buying strong and substantial cars for steel-railway use.

THERE is nothing mysterious in woodworking machinery; cause and effect govern it as with all material things, and a machine which works well today will, if kept in order, work well until worn out. This is a truth that the experienced man will endorse. The problem is to get the right machine. A publication by the J. S. Graham Machine Co., Rochester, N. Y., which is really too good to be called merely a catalogue, offers practical assistance in this direction. The motto of this firm is "superiority of design and excellence of construction." How this has been observed is best shown by the satisfied and extensive crowd that is using the Graham Company's machines. Each member of the company is a mechanical engineer of many years' experience in designing and manufacturing woodworking machinery, and all are thoroughly familiar with the details of the establishment and give their personal and undivided attention to the specialty of woodworking machinery. The publication issued by the company describes and illustrates a new and improved timber planing machine, as well as a number of perfected machines whose reputation are already established.

AN album of blue-prints illustrating the modern methods now employed in handling coal has been issued by the Link-Belt Engineering Co., of Philadelphia, Pa. This is an interesting contribution to the really meritorious class of trade literature. It shows the wonderful economy as well as celerity with which coal in great quantities can be handled. The views are comprehensive and explicit in details and are finely executed. Among the plants shown are a 180-ton coaling station with bridge, erected in 1894 for the New York Central Railroad at Croton, N. Y., with conveyor capacity of eighty tons per hour; handles run of mine, bituminous and lump anthracite, and provided with weighing hoppers and winch for drilling cars; a similar plant built at East Albany, N. Y., for the same railroad; a 100-ton coaling station with 1100-ton storage pocket, capacity eighty tons per hour, at Lyons, N. Y., same road; a locomotive coaling station at New Buffalo, Mich.; 200-ton coaling pocket with 20,000-ton storage plant at Oneonta, N. Y.; patent gravity-discharge coal elevator, steel frame, forty feet vertical and fifty feet horizontal, at Buffalo, N. Y.; ash-handling plant, steel construction, Pencoyd Iron Works, Pencoyd, Pa. These few examples indicate the scope and variety of the plants installed by this company.

A NEW slate manual has been issued by the Slatington-Bangor Slate Syndicate, of Slatington,

Pa. It gives some interesting facts relative to the utility of slate for various purposes. A chapter on slate roofs will be read with interest by the public. First cost, durability, appearance, resistance to fire, the cost of maintenance or repairs and insurance are considerations affecting the value of roofing material. The advocates of slate for roofing purposes claim that it excels in the possession of all of the qualities. Slate is said to be almost absolutely indestructible, as it will not rust, rot or burn, is not affected by frost and will not expand with heat or contract with cold. It is claimed that a roof made of good slate will last seventy five years without appreciable deterioration either in appearance or serviceable quality. Roofing slate of uniform shade contributes not a little to the beauty of a building. If the slate be of good quality there will be no change or fading in color, but it will ever remain of the same hue. No deposit can obscure its original color, for with each passing shower every particle of dust and dirt is washed from its plain, smooth surface. Slate roofs can be made very ornamental by arranging slate upon the roof in different forms and colors. Where this is done the combination of form and color produce a fine effect, and particularly so if the building is of tasteful architecture, with steep roof, as cottage or villa, and on mansard roofs. With the different colors, names, dates, etc., may be worked in the roof with lasting and pleasing effect. The syndicate issuing this manual furnishes slate for all purposes.

CHARLOTTE, N. C.—The Buford Hotel, Charlotte, N. C., has recently been remodeled and refitted, and is receiving a liberal share of patronage. The new proprietors, Messrs. Farintosh & Amer, are both experienced hotel men, and every department is in the hands of capable assistants.

Rehoboth—Train Service from and to Baltimore.

The Pennsylvania Railroad Co. announces that, commencing Saturday, July 6, the "Peninsula Express," leaving Union Station 3.00 P. M., will connect through to Rehoboth, arriving at that point 8.02 P. M. Returning, train will leave Rehoboth 7.18 A. M. week-days. This is in addition to connections of train now leaving Union Station at 6.25 A. M., arriving Rehoboth 12.27 P. M., and returning, leaving Rehoboth 2.50 P. M. week-days.

Summer Vacation Tours.

The Baltimore & Ohio Railroad Co. now has on sale at all its offices east of the Ohio river a full line of tourist excursion tickets to all the lake, mountain and seashore resorts in the Eastern and Northern States, and in Canada. These tickets are valid for return journey until October 31. Before deciding upon your summer outing it would be well to consult the B. & O. book of "Routes and Rates for Summer Tours." All B. & O. ticket agents at principal points have them, and they will be sent postpaid upon receipt of ten cents by Chas. O. Scull, general passenger agent, B. & O. R. R., Baltimore, Md.

Through Parlor-Car Line, Baltimore to Saratoga.

The Pennsylvania Railroad Co. has placed in service on its train leaving Union Station, Baltimore, 10.08 A. M. week-days, a through buffet parlor-car to Saratoga. At Jersey City car is attached to the "Saratoga & Catskill Mountain Limited" over the West Shore and Delaware & Hudson Railroads, arriving at Saratoga 9.15 P. M. Returning, car leaves Saratoga 8.25 A. M. This through car adds immensely to the facilities of travel between Baltimore and resorts on the Hudson, in the Catskill mountains and the famous Adirondacks region.

Plantation Machinery.

The official Louisiana Sugar and Rice Planters' Directory for 1895-6, published by Edwards & Morrison, 124 St. Charles street, New Orleans, La., is now in course of preparation for the press, and will appear about August 15. This directory will contain a complete list of cane and sugar factories in Texas, Florida and Louisiana; all sugar and rice planters' names, post-offices, shipping points, with capacity and character of sugar-houses, etc.; also a list of landings on Mississippi, Red and Ouachita rivers, of sugar and rice factors, brokers and mills in New Orleans. It is published under the auspices of the Louisiana Sugar and Rice Exchange, and will be correct and complete in every detail. The price will be \$5 per copy, cash with order. All subscribers are entitled to an advertisement of their business under classified heading without extra charge. This reference book is invaluable to firms seeking business from planters.

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Excursion to Washington August 3 and 4.

The Pennsylvania Railroad Co. will sell at its Baltimore ticket offices on Saturday and Sunday, August 3 and 4, excursion tickets to Washington and return at the low rate of \$1.25 for the round trip. Tickets valid for use on all regular trains in each direction, and good for return passage until Monday, August 5, inclusive.

NIAGARA FALLS.

\$10 Tours via Pennsylvania Railroad

The next of the series of personally-conducted tours to Niagara Falls via Pennsylvania Railroad will leave Baltimore 8.15 A. M. on Thursday, August 8.

The rate for round-trip tickets good for ten days is \$10 from Baltimore; proportionate rates from other points.

A special train of Pullman parlor cars and day coaches will be run, and a tourist agent and chaperon will accompany the tour.

The tickets will permit of stop off at Watkins and Rochester in each direction, and at Buffalo on the return trip.

For specific rates and parlor-car accommodations application should be made to ticket agents, Union and Calvert Stations, or city ticket office, northeast corner Baltimore and Calvert streets.

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Buckeye Iron and Brass Works. 32						
Buckeye Mfg. Co. 18						
Buffalo Forge Co. 48						
Burnham Bros. 41						
Burrows, E. T., Co. 9						
Burt Manufacturing Co. 10						
Bushnell, G. H., Press Co. 32						
Byers, Jno. F., Machine Co. 4						
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C. & B. Line. 44						
Caldwell, H. W., & Son Co. 2						
Caldwell Land & Lumber Co. 28						
Callahan & Lewis Mfg. Co., Ltd. *						
Camden Steel Roofing & Cor. Co. *						
Cameron, A. S., Steam Pump Wks. 40						
Cameron & Barkley Co. 21						
Campbell & Zell Co. 15						
Canby, Edward T. 27						
Canton Steel-Roofing Co. 35						
Capital Stained Glass Works. 34						
Cardwell Machine Co. 33						
Carnell, George. 42						
Carolina Buff & Brown Stone Co. 25						
Caroline Iron Works. 21						
Carver's, Jno. S., Dairy Sup. House. 25						
Carver Cotton Gin Co. 32						
Castner & Curran. 39						
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Central Manufacturing Co. 45						
Chapman, Wm. A., & Co. 6						
Chapman Valve Mfg. Co. 42						
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* Not in this issue